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In the Specification:

Please amend the specification as shown.

Please amend the paragraph on page 18, lines 6-27, as follows:

In another embodiment of the invention, said nucleotides are linked to each other by means of a phosphorothioate group, such as all nucleotides being linked to each other by means of a phosphorothioate group. An interesting embodiment of the invention is directed to compounds of SEQ NO 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, and 144 wherein each linkage group within each compound is a phosphorothioate group. Such modifications is denoted by the subscript S. Alternatively stated, one aspect of the invention is directed to compounds of SEQ NO 2_{A_1} , 3_{A_2} , 4_{A_3} , 5_{A_5} , 6_{S_5} , 7_{S_5} , 8_{S_5} , 9_{A_5} , 10_{A_5} , 11_{A_5} , 12_{A_5} , 13_{A_5} , 14_{A_5} $15_{A}, 16_{A}, 17_{A}, 18_{A}, 19_{A}, 20_{A}, 21_{A}, 22_{A}, 23_{A}, 24_{A}, 25_{A}, 26_{A}, 27_{A}, 28_{A}, 29_{A}, 30_{A}, 31_{A}, 32_{A}, 33_{A}$ 34_{A} , 35_{A} , 36_{A} , 37_{S} , 38_{A} , 39_{A} , 40_{A} , 41_{A} , 42_{A} , 43_{A} , 44_{A} , 45_{A} , 46_{A} , 47_{A} , 48_{A} , 49_{A} , 50_{A} , 51_{A} , 52_{A} , 53_{A} , 54_{A} , 55_{A} , 56_{A} , 57_{A} , 58_{A} , 59_{A} , 60_{A} , 61_{A} , 62_{A} , 63_{A} , 64_{A} , 65_{A} , 66_{A} , 67_{A} , 68_{A} , 69_{A} , 70_{A} , 71_{A} , 72a, 73a, 74a, 75a, 76a, 77a, 78a, 79a, 80a, 81a, 82a, 83a, 84a, 85a, 86a, 87a, 88a, 89a, 90a, $91_{A}, 92_{A}, 93_{A}, 94_{A}, 95_{A}, 96_{A}, 97_{A}, 98_{A}, 99_{A}, 100_{A}, 101_{A}, 102_{A}, 103_{A}, 104_{A}, 105_{A}, 106_{A}, 107_{A}$ 108_{A} , 109_{A} , 101_{A} , 102_{A} , 103_{A} , 104_{A} , 105_{A} , 106_{A} , 107_{A} , 108_{A} , 109_{A} , 110_{A} , 111_{A} , 112_{A} , 113_{A} , 114a, 115a, 116a, 117a, 118a, 119a, 120a, 121a, 122a, 123a, 124a, 125a, 126a, 127a, 128a, 129_{A} , 130_{A} , 131_{A} , 132_{A} , 133_{A} , 134_{A} , 135_{A} , 136_{A} , 137_{A} , 138_{A} , 139_{A} , 140_{A} , 141_{A} , 142_{A} , 143_{A} and 144_A- 147, 151, 155, 159, 163, 167, 171, 175, 179, 183, 187, 191, 195, 199, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252, 256, 260, 264, 268, 272, 276, 280, **284**, **288**, **292**, **296**, **300**, **304**, **308**, **312**, **316**, **320**, **324**, **328**, **332**, **336**, **340**, **344**, **348**, **352**,

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356, 360, 364, 368, 372, 376, 380, 384, 388, 392, 396, 400, 404, 408, 412, 416, 420, 424, 428, 432, 436, 440, 444, 448, 452, 456, 460, 464, 468, 472, 476, 480, 484, 488, 492, 496, 500, 504, 508, 512, 516, 520, 524, 528, 532, 536, 540, 544, 548, 552, 556, 560, 564, 568, 572, 576, 580, 584, 588, 592, 596, 600, 604, 608, 612, 616, 620, 624, 628, 632, 636, 640, 644, 648, 652, 656, 660, 664, 668, 672, 676, 680, 684, 688, 692, 696, 700, 704, 708, 712 and 716.

Please amend the paragraph on page 18, lines 29-30, as follows:

A preferred subset of embodiments of the invention are compounds comprising sequences of the formula 2_A, 4_A, 6_A, 9_A, 15_A, 118_A, 120_A, 123_A, 128_A, 129_A, and 131_A SEQ ID NOS 147, 155, 163, 175, 199, 612, 620, 632, 652, 656 and 664.

Please amend the paragraph on page 18, line 32, to page 19, line 2, as follows:

A further aspect of the invention is directed to compounds of SEQ NOS 2_B, 3_B, 4_B, 5_B, 6_S, 7_S, 8_B, 9_B, 10_B, 11_B, 12_B, 13_B, 14_B, 15_B, 16_B, 17_B, 18_B, 19_B, 20_B, 21_B, 22_B, 23_B, 24_B, 25_B, 26_B, 27_B, 28_B, 29_B, 30_B, 31_B, 32_B, 33_B, 34_B, 35_B, 36_B, 37_S, 38_B, 39_B, 40_B, 41_B, 42_B, 43_B, 44_B, 45_B, 46_B, 47_B, 48_B, 49_B, 50_B, 51_B, 52_B, 53_B, 54_B, 55_B, 56_B, 57_B, 58_B, 59_B, 60_B, 61_B, 62_B, 63_B, 64_B, 65_B, 66_B, 67_B, 68_B, 69_B, 70_B, 71_B, 72_B, 73_B, 74_B, 75_B, 76_B, 77_B, 78_B, 79_B, 80_B, 81_B, 82_B, 83_B, 84_B, 85_B, 86_B, 87_B, 88_B, 89_B, 90_B, 91_B, 92_B, 93_B, 94_B, 95_B, 96_B, 97_B, 98_B, 99_B, 100_B, 101_B, 102_B, 103_B, 104_B, 105_B, 106_B, 107_B, 108_B, 109_B, 101_B, 102_B, 103_B, 104_B, 105_B, 106_B, 107_B, 108_B, 109_B, 111_B, 112_B, 113_B, 114_B, 115_B, 116_B, 117_B, 118_B, 119_B, 120_B, 121_B, 122_B, 123_B, 124_B, 125_B, 126_B, 127_B, 128_B, 129_B, 130_B, 131_B, 132_B, 133_B, 134_B, 135_B, 136_B, 137_B, 138_B, 139_B, 140_B, 141_B, 142_B, 143_B, and 144_B. 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 205, 209, 213, 217, 221, 225, 229, 233, 237, 241, 245, 249, 253, 257, 261, 265, 269, 273, 277, 281, 285, 289, 293, 297, 301, 305, 309, 313, 317, 321, 325, 329, 333, 337, 341, 345, 349, 353, 357, 361, 365, 369, 373, 377, 381, 385, 389, 393, 397, 401, 405, 409, 413, 417, 421, 425, 429, 433, 437, 441, 445, 449, 453, 457, 461, 465, 469,

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473, 477, 481, 485, 489, 493, 497, 501, 505, 509, 513, 517, 521, 525, 529, 533, 537, 541, 545, 549, 553, 557, 561, 565, 569, 573, 577, 581, 585, 589, 593, 597, 601, 605, 609, 613, 617, 621, 625, 629, 633, 637, 641, 645, 649, 653, 657, 661, 665, 669, 673, 677, 681, 685, 689, 693, 697, 701, 705, 709, 713 and 717.

Please amend the paragraph on page 19, lines 4-5, as follows:

A preferred subset of embodiments of the invention are compounds comprising sequences of the <u>SEQ ID NOS</u> formula 118_B, 119_B, 120_B, 121_B, 122_B, 123_B, 128_B, 129_B, 130_B, and 131_B.
613, 617, 621, 625, 629, 633, 653, 657, 661 and 665.

Please amend the paragraph on page 19, lines 7-16, as follows:

A further aspect of the invention is directed to compounds of SEQ NOS 2_G, 3_G, 4_G, 5_G, 6_S, 7_S; 8_G, 9_G, 10_G, 11_G, 12_G, 13_G, 14_G, 15_G, 16_G, 17_G, 18_G, 19_G, 20_G, 21_G, 22_G, 23_G, 24_G, 25_G, 26_G; 27_G, 28_G, 29_G, 30_G, 31_G, 32_G, 33_G, 34_G, 35_G, 36_G, 37_S, 38_G, 39_G, 40_G, 41_G, 42_G, 43_G, 44_G, 45_G; 46_G, 47_G, 48_G, 49_G, 50_G, 51_G, 52_G, 53_G, 54_G, 55_G, 56_G, 57_G, 58_G, 59_G, 60_G, 61_G, 62_G, 63_G, 64_G; 65_G, 66_G, 67_G, 68_G, 69_G, 70_G, 71_G, 72_G, 73_G, 74_G, 75_G, 76_G, 77_G, 78_G, 79_G, 80_G, 81_G, 82_G, 83_G, 84_G, 85_G, 86_G, 87_G, 88_G, 89_G, 90_G, 91_G, 92_G, 93_G, 94_G, 95_G, 96_G, 97_G, 98_G, 99_G, 100_G, 101_G, 102_G, 103_G, 104_G, 105_G, 106_G, 107_G, 108_G, 109_G, 101_G, 102_G, 103_G, 104_G, 105_G, 106_G, 107_G, 108_G, 109_G, 101_G, 111_G, 112_G, 113_G, 114_G, 115_G, 116_G, 117_G, 118_G, 119_G, 120_G, 121_G, 122_G, 123_G, 124_G, 125_G, 126_G, 127_G, 128_G, 129_G, 130_G, 131_G, 132_G, 133_G, 134_G, 135_G, 136_G, 137_G, 138_G, 139_G, 140_G, 141_G, 142_G, 143_G, and 144_G, 149, 153, 157, 161, 165, 169, 173, 177, 181, 185, 189, 193, 197, 201, 206, 210, 214, 218, 222, 226, 230, 234, 238, 242, 246, 250, 254, 258, 262, 266, 270, 274, 278, 282, 286, 290, 294, 298, 302, 306, 310, 314, 318, 322, 326, 330, 334, 338, 342, 346, 350, 354, 358, 362, 366, 370, 374, 378, 382, 386, 390, 394, 398, 402, 406, 410, 414, 418, 422, 426, 430, 434, 438, 442, 446, 450, 454, 458, 462, 466, 470, 474, 478, 482, 486, 490, 494, 498, 502, 506, 510, 514, 518, 522, 526, 530, 534, 538, 542,

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546, 550, 554, 558, 562, 566, 570, 574, 578, 582, 586, 590, 594, 598, 602, 606, 610, 614, 618, 622, 626, 630, 634, 638, 642, 646, 650, 654, 658, 662, 666, 670, 674, 678, 682, 686, 690, 694, 698, 702, 706, 710, 714 and 718.

Please amend the paragraph on page 19, lines 18-27, as follows:

A further aspect of the invention is directed to compounds of SEQ NOS 2_D , 3_D , 4_D , 5_D , 6_S , 7_S , 8_D, 9_D, 10_D, 11_D, 12_D, 13_D, 14_D, 15_D, 16_D, 17_D, 18_D, 19_D, 20_D, 21_D, 22_D, 23_D, 24_D, 25_D, 26_D, 27_D, 28_D, 29_D, 30_D, 31_D, 32_D, 33_D, 34_D, 35_D, 36_D, 37_S, 38_D, 39_D, 40_D, 41_D, 42_D, 43_D, 44_D, 45_D, 46_D, 47_D, 48_D, 49_D, 50_D, 51_D, 52_D, 53_D, 54_D, 55_D, 56_D, 57_D, 58_D, 59_D, 60_D, 61_D, 62_D, 63_D, 64_D, 65p, 66p, 67p, 68p, 69p, 70p, 71p, 72p, 73p, 74p, 75p, 76p, 77p, 78p, 79p, 80p, 81p, 82p, 83p, 84p, 85p, 86p, 87p, 88p, 89p, 90p, 91p, 92p, 93p, 94p, 95p, 96p, 97p, 98p, 99p, 100p, 101p, 102_D, 103_D, 104_D, 105_D, 106_D, 107_D, 108_D, 109_D, 101_D, 102_D, 103_D, 104_D, 105_D, 106_D, 107_D, 108_{D} , 109_{D} , 110_{D} , 111_{D} , 112_{D} , 113_{D} , 114_{D} , 115_{D} , 116_{D} , 117_{D} , 118_{D} , 119_{D} , 120_{D} , 121_{D} , 122_{D} , $123_{\rm p}$, $124_{\rm p}$, $125_{\rm p}$, $126_{\rm p}$, $127_{\rm p}$, $128_{\rm p}$, $129_{\rm p}$, $130_{\rm p}$, $131_{\rm p}$, $132_{\rm p}$, $134_{\rm p}$, $134_{\rm p}$, $135_{\rm p}$, $136_{\rm p}$, $137_{\rm p}$, 138_D, 139_D, 140_D, 141_D, 142_D, 143_D, and 144_D, 150, 154, 158, 162, 166, 170, 174, 178, 182, 186, 190, 194, 198, 202, 207, 211, 215, 219, 223, 227, 231, 235, 239, 243, 247, 251, 255, 259, 263, 267, 271, 275, 279, 283, 287, 291, 295, 299, 303, 307, 311, 315, 319, 323, 327, 331, 335, 339, 343, 347, 351, 355, 359, 363, 367, 371, 375, 379, 383, 387, 391, 395, 399, <u>403, 407, 411, 415, 419, 423, 427, 431, 435, 439, 443, 447, 451, 455, 459, 463, 467, 471, </u> <u>475, 479, 483, 487, 491, 495, 499, 503, 507, 511, 515, 519, 523, 527, 531, 535, 539, 543, </u> 547, 551, 555, 559, 563, 567, 571, 575, 579, 583, 587, 591, 595, 599, 603, 607, 611, 615, 619, 623, 627, 631, 635, 639, 643, 647, 651, 655, 659, 663, 667, 671, 675, 679, 683, 687, 691, 695, 699, 703, 707, 711, 715 and 719.

Please amend the paragraph on page 19, lines 29-38, as follows:

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A further aspect of the invention is directed to compounds of SEQ NO 2_E , 3_E , 4_E , 5_E , 6_S , 7_S , 8_E , 9_E , 10_E , 11_E , 12_E , 13_E , 14_E , 15_E , (SEQ ID NO: 203) 16_E , 17_E , 18_E , 19_E , 20_E , 21_E , 22_E , 23_E , 24_E , 25_E , 26_E , 27_E , 28_E , 29_E , 30_E , 31_E , 32_E , 33_E , 34_E , 35_E , 36_E , 37_S , 38_E , 39_E , 40_E , 41_E , 42_E , 43_E , 44_E , 45_E , 46_E , 47_E , 48_E , 49_E , 50_E , 51_E , 52_E , 53_E , 54_E , 55_E , 56_E , 57_E , 58_E , 59_E , 60_E , 61_E , 62_E , 63_E , 64_E , 65_E , 66_E , 67_E , 68_E , 69_E , 70_E , 71_E , 72_E , 73_E , 74_E , 75_E , 76_E , 77_E , 78_E , 79_E , 80_E , 81_E , 82_E , 83_E , 84_E , 85_E , 86_E , 87_E , 88_E , 89_E , 90_E , 91_E , 92_E , 93_E , 94_E , 95_E , 96_E , 97_E , 98_E , 99_E , 100_E , 101_E , 102_E , 103_E , 104_E , 105_E , 106_E , 107_E , 108_E , 109_E , 101_E , 102_E , 103_E , 104_E , 105_E , 106_E , 107_E , 108_E , 109_E , 110_E , 110

Please amend the paragraph on page 23 line 26 to page 24, line 12 as follows:

In a suitable embodiment, the subsequence is SEQ ID NO: 147 2a. In a suitable embodiment, the subsequence is SEQ ID NO: 151 3a. In a suitable embodiment, the subsequence is SEQ ID NO: 159 5a. In a suitable embodiment, the subsequence is SEQ ID NO: 169 5a. In a suitable embodiment, the subsequence is SEQ ID NO: 163 6a. In a suitable embodiment, the subsequence is SEQ ID NO: 167 7a. In a suitable embodiment, the subsequence is SEQ ID NO: 171 8a. In a suitable embodiment, the subsequence is SEQ ID NO: 179 40a. In a suitable embodiment, the subsequence is SEQ ID NO: 183 11a. In a suitable embodiment, the subsequence is SEQ ID NO: 187 12a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 191 13a. In a suitable embodiment, the subsequence is SEQ ID NO: 612 118a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodiment, the subsequence is SEQ ID NO: 610 119a. In a suitable embodimen

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ID NO: 624-121a. In a suitable embodiment, the subsequence is SEQ ID NO: 628 122a. In a suitable embodiment, the subsequence is SEO ID NO: 632 123a. In a suitable embodiment, the subsequence is SEQ ID NO: 636 124a. In a suitable embodiment, the subsequence is SEQ ID NO: 640 125a. In a suitable embodiment, the subsequence is SEQ ID NO: 644 126a. In a suitable embodiment, the subsequence is SEQ ID NO: 648 127a. In a suitable embodiment, the subsequence is SEQ ID NO: 652 128a. In a suitable embodiment, the subsequence is SEQ ID NO: 656 129a. In a suitable embodiment, the subsequence is SEQ ID NO: 660 130a. In a suitable embodiment, the subsequence is SEQ ID NO: 664 131a. In a suitable embodiment, the subsequence is SEQ ID NO: 668 132a. In a suitable embodiment, the subsequence is SEQ ID NO: 672 133a. In the immediately aforementioned individual suitable embodiments wherein the subsequence is one selected from SEQ ID NOS: 2a-144a-148, 152, 156, 160, <u>164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 205, 209, 213, 217, 221, 225, 229, 233, </u> 237, 241, 245, 249, 253, 257, 261, 265, 269, 273, 277, 281, 285, 289, 293, 297, 301, 305, <u>309, 313, 317, 321, 325, 329, 333, 337, 341, 345, 349, 353, 357, 361, 365, 369, 373, 377, </u> 381, 385, 389, 393, 397, 401, 405, 409, 413, 417, 421, 425, 429, 433, 437, 441, 445, 449, 453, 457, 461, 465, 469, 473, 477, 481, 485, 489, 493, 497, 501, 505, 509, 513, 517, 521, <u>525, 529, 533, 537, 541, 545, 549, 553, 557, 561, 565, 569, 573, 577, 581, 585, 589, 593, </u> <u>597, 601, 605, 609, 613, 617, 621, 625, 629, 633, 637, 641, 645, 649, 653, 657, 661, 665, </u> 669, 673, 677, 681, 685, 689, 693, 697, 701, 705, 709, 713 and 717, the 3' end LNA of the subsequence may suitably be replaced by the corresponding nucleotide.

Please amend the paragraph on page 24 line 21 to page 25, line 9, as follows:

In a suitable embodiment, the compound consists of SEQ ID NO: 147 2a. In a suitable embodiment, the compound consists of SEQ ID NO: 151 3a. In a suitable embodiment, the compound consists of SEQ ID NO: 155 4a. In a suitable embodiment, the compound consists of SEQ ID NO: 159 5a. In a suitable embodiment, the compound consists of SEQ ID NO: 163 6a. In a suitable embodiment, the compound consists of SEQ ID NO: 167 7a. In a suitable

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embodiment, the compound consists of SEQ ID NO: 171 &a. In a suitable embodiment, the compound consists of SEO ID NO: 175 9a. In a suitable embodiment, the compound consists of SEQ ID NO: 179 10a. In a suitable embodiment, the compound consists of SEQ ID NO: 183 11a. In a suitable embodiment, the compound consists of SEQ ID NO: 187 12a. In a suitable embodiment, the compound consists of SEO ID NO: 191 13a. In a suitable embodiment, the compound consists of SEQ ID NO: 195 14a. In a suitable embodiment, the compound consists of SEQ ID NO: 199 15a. In a suitable embodiment, the compound consists of SEO ID NO: 608 117a. In a suitable embodiment, the compound consists of SEO ID NO: 612 118a. In a suitable embodiment, the compound consists of SEQ ID NO: 616 119a. In a suitable embodiment, the compound consists of SEQ ID NO: 620 120a. In a suitable embodiment, the compound consists of SEQ ID NO: 624 121a. In a suitable embodiment, the compound consists of SEQ ID NO: 628 122a. In a suitable embodiment, the compound consists of SEQ ID NO: 632 123a. In a suitable embodiment, the compound consists of SEQ ID NO: 636 124a. In a suitable embodiment, the compound consists of SEQ ID NO: 640 125a. In a suitable embodiment, the compound consists of SEQ ID NO: 644 126a. In a suitable embodiment, the compound consists of SEQ ID NO: 648 127a. In a suitable embodiment, the compound consists of SEO ID NO: 652 128a. In a suitable embodiment, the compound consists of SEQ ID NO: 656 129a. In a suitable embodiment, the compound consists of SEQ ID NO: 660 130a. In a suitable embodiment, the compound consists of SEQ ID NO: 664 131a. In a suitable embodiment, the compound consists of SEQ ID NO: 668 132a. In a suitable embodiment, the compound consists of SEQ ID NO: 672 133a. In the immediately aforementioned individual suitable embodiments wherein the compound is one selected from SEQ ID NOS: 2a-144a-147, 151, 155, 159, 163, 167, 171, 175, 179, 183, 187, 191, 195, 199, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, <u>248, 252, 256, 260, 264, 268, 272, 276, 280, 284, 288, 292, 296, 300, 304, 308, 312, 316, </u> 320, 324, 328, 332, 336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 380, 384, 388, 392, 396, 400, 404, 408, 412, 416, 420, 424, 428, 432, 436, 440, 444, 448, 452, 456, 460, 464, 468, 472, 476, 480, 484, 488, 492, 496, 500, 504, 508, 512, 516, 520, 524, 528, 532,

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536, 540, 544, 548, 552, 556, 560, 564, 568, 572, 576, 580, 584, 588, 592, 596, 600, 604, 608, 612, 616, 620, 624, 628, 632, 636, 640, 644, 648, 652, 656, 660, 664, 668, 672, 676, 680, 684, 688, 692, 696, 700, 704, 708, 712 and 716, the 3' end LNA of the compound may suitably be replaced by the corresponding nucleotide.

Please amend the paragraph on page 63 lines 8-15 as follows:

First strand synthesis was performed using OmniScript Reverse Transcriptase kit (cat# 205113, Qiagen) according to the manufacturers instructions. For each sample 0.5 μ g total RNA was adjusted to 12 μ l each with RNase free H₂O and mixed with 2 μ l poly (dT)₁₂₋₁₈ (SEQ ID NO: 741)(2.5 μ g/ml) (Life Technologies, GibcoBRL,

RNAguardTMRnase INHIBITOR (33.3U/ml), (cat# 27-0816-01, Amersham Pharmacia Biotech, Hørsholm, DK) and 1 μl OmniScript Reverse Transcriptase (4 U/μl) followed by incubation at 37°C for 60 minutes and heat inactivation of the enzyme at 93°C for 5 minutes.

Please amend the paragraph on page 64 lines 9-18, as follows:

Roskilde, DK), 2 µl dNTP mix (5 mM each dNTP), 2 µl 10x Buffer RT, 1 µl

For human Survivin the PCR primers were:

Assay 1

assay; 0.9 µM)

forward primer: 5' caggtccccgctttctttg 3' (SEQ ID NO: 727) (final concentration in the assay; 0.6 μM)

reverse primer: 5' ggaggagggcgaatcaaa 3' (SEQ ID NO: 728) (final concentration in the assay; 0.6 μM) and the PCR probe was: 5' FAM- ccatcatcttacgccagacttcagcc-TAMRA 3' (SEQ ID NO: 729) (final concentration in the assay; 0.1 μM) Assay 2 forward primer: 5' aaggaccaccgcatctctaca 3' (SEQ ID NO: 730) (final concentration in the

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(0.2 μM final concentration).

reverse primer: 5' ccaagtctggctcgttctcagt 3' (SEQ ID NO: 731) (final concentration in the assay; 0.6 μM) and the PCR probe was: 5' FAM- cgaggctggcttcatccactgcc -TAMRA 3'(SEQ ID NO: 732) (final concentration in the assay; 0.1 μM)

Please amend the paragraph on page 64 lines 27-31, as follows:

For quantification of mouse GAPDH mRNA the following primers and probes were designed: Sense primer 5'aaggctgtgggcaaggtcatc 3' (SEQ ID NO: 733)(0.3 µM final concentration), antisense primer 5' gtcagatccacgacggacacatt (SEQ ID NO: 734) (0.6 µM final concentration), TaqMan probe 5' FAM-gaagctcactggcatggcatggcatggcttccgtgttc-TAMRA 3' (SEQ ID NO: 735)

Please amend the paragraph on page 65 lines 7-13, as follows:

Northern blot analysis was carried out by procedures well known in the art essentially as described in Current Protocols in Molecular Biology, John Wiley & Sons.

The hybridisation probe was obtained by PCR-amplification of a 373 bp fragment from 1 μl cDNA obtained by reverse transcription PCR. The reaction was carried out using primers 5' agcacaaagccattctaagtcattg 3' (SEQ ID NO: 736) (forward) and 5' tccatcatcttacgccagacttc 3' (SEQ ID NO: 737) (reverse) at 0,5 μM final concentration each, 200 nM each dNTP, 1,5 mM MgCl₂ and Platinum Taq DNA polymerase (Invitrogen cat. no. 10966-018).

Please amend the paragraph on page 66 lines 6-11, as follows:

Equality of RNA sample loading was assessed by stripping the blot in 0,5% SDS in H₂O at 85°C and reprobing with a labelled GAPDH (glyceraldehyde-3-phosphate dehydrogenase)

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probe obtained essentially as described above using the primers 5' aacggatttggtcgtatt 3' (SEQ ID NO: 739) (forward) and 5' taagcagttggtggtgca 3' (SEQ ID NO: 740) (reverse). See figure 2 and 3. Intensity was monitored with phosphoimager Biorad, FX-scanner (see below). The tested oligomeric compounds are presented in Example 10.

Please amend Table 1 starting on page 67, as follows:

Table 1 Oligomeric compounds of the invention

Oligomeric compounds were evaluated for their potential to knockdown Survivin mRNA in 15PC3 cells. The data are presented as percentage downregulation relative to mock transfected cells. Transcript steady state was monitored by Real-time PCR and normalised to the GAPDH transcript steady state. Note that all LNA C are 5'-Methyl-Cytosine.

Target site	SEQ ID <u>NO:</u>	Oligomeric compound Sequence 5'-3'	Seq ID+ Design	Specific design of Oligomeric compound Capital letters β-D-oxy-LNA: S= phosphorthioate Θ=-O-P(O)2-O- Small letters DNA sugar.	% Inhibi-tion at 25 nM	% Inhibi-tion at 5 nM oligo
172	2	GCAGTGGATGAAGCCA	2A 147	$\mathbf{G_{S}C_{S}A_{S}G_{S}t_{S}g_{S}g_{S}a_{S}t_{S}g_{S}a_{S}a_{S}G_{S}C_{S}C_{S}A}$	85	44
			2B 148	$G_sC_sA_sG_st_sg_sg_sa_st_sg_sa_sa_sG_sC_sC_sa$	91	
			2C 149	$\begin{bmatrix} G_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{O}}t_{\mathbf{g}}g_{\mathbf{g}}g_{\mathbf{g}}a_{\mathbf{g}}t_{\mathbf{g}}g_{\mathbf{g}}a_{\mathbf{g}}a_{\mathbf{g}}G_{\mathbf{O}}C_{\mathbf{O}} \\ C_{\mathbf{O}}A \end{bmatrix}$		
			2 D 150	$g_s c_s a_s g_s t_s g_s g_s a_s t_s g_s a_s a_s g_s c_s c_s a$		
198	3	GCCAAGTCTGGCTCGT	3A 151	$G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}T$	49	
			3B 152	$G_sC_sC_sA_sa_sg_st_sc_st_sg_sg_sc_sT_sC_sG_st$		
			3 C 153	$\begin{bmatrix} \mathbf{G_O} \mathbf{C_O} \mathbf{A_O} \mathbf{a_S} \mathbf{g_S} \mathbf{t_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{g_S} \mathbf{c_S} \mathbf{T_O} \mathbf{C_O} \\ \mathbf{G_O} \mathbf{T} \end{bmatrix}$		
			3 D 154	$\mathbf{g_sc_sc_sa_sa_sg_st_sc_st_sg_sg_sc_st_sc_sg_st}$		
206	4	AACACTGGGCCAAGTC	4A 155	$\mathbf{A_s}\mathbf{A_s}\mathbf{C_s}\mathbf{A_s}\mathbf{c_s}\mathbf{t_s}\mathbf{g_s}\mathbf{g_s}\mathbf{g_s}\mathbf{g_s}\mathbf{c_s}\mathbf{c_s}\mathbf{a_s}\mathbf{A_s}\mathbf{G_s}\mathbf{T_s}\mathbf{C}$	74	

	T		4B 156	$A_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}c$	91	
			4 C 157	$\begin{array}{c} \mathbf{A_O A_O C_O A_O c_S t_S g_S g_S g_S c_S c_S a_S A_O G_O} \\ \mathbf{T_O C} \end{array}$		
-			4D 158	$a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}c$		
214	5	GCAGAAGAAACACTGG	5A 159	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}G$	67	
			5B 160	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}g$		
			5 C 161	$\begin{bmatrix} \mathbf{G_O}\mathbf{C_O}\mathbf{A_O}\mathbf{G_O}\mathbf{a_S}\mathbf{a_S}\mathbf{g_S}\mathbf{a_S}\mathbf{a_S}\mathbf{a_S}\mathbf{a_S}\mathbf{c_S}\mathbf{a_S}\mathbf{C_O}\mathbf{T_O} \\ \mathbf{G_O}\mathbf{G} \end{bmatrix}$		
			5D 162	$g_{S}c_{S}a_{S}g_{S}a_{S}a_{S}g_{S}a_{S}a_{S}a_{S}a_{S}c_{S}a_{S}c_{S}t_{S}g_{S}g$		
216	6	AAGCAGAAGAAACACT	6A 163	$\mathbf{A_{S}A_{S}G_{S}C_{S}}\mathbf{a_{S}}\mathbf{g_{S}}\mathbf{a_{S}}a_{$	88	63
			6B 164	$A_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}t$	79	
			6 C 165	$\begin{array}{c} \mathbf{A_O A_O G_O C_O} \mathbf{a_S g_S a_S a_S g_S a_S a_S a_S C_O A_O} \\ \mathbf{C_O T} \end{array}$		
			6D 166	$a_S a_S g_S c_S a_S g_S a_S a_S g_S a_S a_S a_S c_S a_S c_S t_S$		
238	7	CTCCCAGCCTTCCAGC	7A 167	$C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}C$	26	
			7B 168	$C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}c$		
			7C 169	$\begin{array}{c} \mathbf{C_OT_OC_OC_Sa_Sg_Sc_St_St_Sc_SC_OA_OG} \\ \mathbf{O^C} \end{array}$		
			7D 170	$c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c$		
403	8	TTCTTTCTTATTG	8A 171	$\mathbf{T_sT_sC_sT_s}\mathbf{t_s}\mathbf{t_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{A_s}\mathbf{T_s}\mathbf{T_s}\mathbf{G}$	62	
			8B 172	$T_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}T_{\mathbf{S}}T_{\mathbf{S}}$		
			8C <u>173</u>	$\begin{bmatrix} \mathbf{T_O} \mathbf{T_O} \mathbf{C_O} \mathbf{T_O} \mathbf{t_s} \mathbf{t_s} \mathbf{c_s} \mathbf{t_s} \mathbf{t_s} \mathbf{c_s} \mathbf{t_s} \mathbf{t_s} \mathbf{A_O} \mathbf{T_O} \mathbf{T_O} \\ \mathbf{G} \end{bmatrix}$		
			8D 174	$t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}a_{s}t_{s}t_{s}g$		
491	9	TGGGACCAGGCAGCTC	9A	$T_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C$	78	50

	1	T	175	1		
			9B 176	$\mathbf{T_{S}G_{S}G_{S}G_{S}a_{S}c_{S}c_{S}a_{S}g_{S}g_{S}c_{S}a_{S}G_{S}C_{S}T_{S}c}$		
			9 C 177	$ \begin{array}{c} \mathbf{T_{O}G_{O}G_{O}G_{O}a_{S}c_{S}c_{S}a_{S}g_{S}g_{S}c_{S}a_{S}G_{O}C_{O}} \\ \mathbf{T_{O}C} \end{array} $		
-			9 D 178	$t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}a_{s}t_{s}t_{s}g$		
505	10	TGGTGCAGCCACTCTG	10A 179	$T_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}G$	56	
			10B 180	$T_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}g$		
			10C 181	$\begin{bmatrix} T_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}T_{\mathbf{O}}g_{s}c_{s}a_{s}g_{s}c_{s}c_{s}a_{s}c_{s}T_{\mathbf{O}}C_{\mathbf{O}} \\ T_{\mathbf{O}}G \end{bmatrix}$		
			10D 182	$t_{S}g_{S}g_{S}t_{S}g_{S}c_{S}a_{S}g_{S}c_{S}c_{S}c_{S}a_{S}c_{S}t_{S}c_{S}t_{S}g$		
521	11	GAATAAACCCTGGAAG	11A 183	$G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}G$	58	
			11B 184	$\mathbf{G_s} \mathbf{A_s} \mathbf{A_s} \mathbf{T_s} \mathbf{a_s} \mathbf{a_s} \mathbf{a_s} \mathbf{c_s} \mathbf{c_s} \mathbf{c_s} \mathbf{c_s} \mathbf{t_s} \mathbf{g_s} \mathbf{G_s} \mathbf{A_s} \mathbf{A_s} \mathbf{g}$		
			11C 185	$\begin{vmatrix} \mathbf{G_O} \mathbf{A_O} \mathbf{A_O} \mathbf{T_O} \mathbf{a_S} \mathbf{a_S} \mathbf{a_S} \mathbf{c_S} \mathbf{c_S} \mathbf{c_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{G_O} \mathbf{A_O} \\ \mathbf{A_O} \mathbf{G} \end{vmatrix}$		
			11D 186	$g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g$		
531	12	TGGCACCAGGGAATAA	12A 187	$\mathbf{T_{S}G_{S}G_{S}C_{S}}a_{S}c_{S}c_{S}a_{S}g_{S}g_{S}g_{S}a_{S}\mathbf{A_{S}T_{S}A_{S}}\mathbf{A_{S}}$	44	
			12B 188	$T_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}A_{\mathbf{S}}a$		
			12C 189	$\begin{bmatrix} \mathbf{T_O} \mathbf{G_O} \mathbf{G_O} \mathbf{C_O} \mathbf{a_S} \mathbf{c_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{g_S} \mathbf{g_S} \mathbf{a_S} \mathbf{A_O} \mathbf{T_O} \\ \mathbf{A_O} \mathbf{A} \end{bmatrix}$		
			12D 190	$t_{S}g_{S}g_{S}c_{S}a_{S}c_{S}c_{S}a_{S}g_{S}g_{S}g_{S}g_{S}a_{S}a_{S}a_{S}a_{S}a_{S}a$		
566	13	CTAAGACATTGCTAAG	13A 191	$C_sT_sA_sA_sg_sa_sc_sa_st_st_sg_sc_sT_sA_sA_sG$	78	
			13B 192	$\mathbf{C_{S}T_{S}A_{S}A_{S}g_{S}a_{S}c_{S}a_{S}t_{S}t_{S}g_{S}c_{S}T_{S}A_{S}A_{S}g}$		
			13C 193	$\begin{array}{c} \mathbf{C_OT_OA_OA_O}\mathbf{g_sa_sc_sa_st_st_sg_sc_sT_OA_OA} \\ \mathbf{OG} \end{array}$		
			13D 194	$c_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g$		

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579	14	TTGATCTCCTTTCCTA	14A	$T_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}A$	73	
			195	TTO		
			14B 196	$T_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}a$		
	1		14C	$T_{\mathbf{O}}T_{\mathbf{O}}G_{\mathbf{O}}A_{\mathbf{O}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{O}}C_{\mathbf{O}}T$		
			<u>197</u>	O ^A		
			14D 198	$t_s t_s g_s a_s t_s c_s t_s c_s c_s t_s t_s t_s c_s c_s t_s a_s$		
608	15	GCACAGTTGAAACATC	15A 199	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}C$	96	93
			15B 200	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}c$	89	79
			15C	$G_{O}C_{O}A_{O}C_{O}a_{s}g_{s}t_{s}t_{s}g_{s}a_{s}a_{s}a_{s}C_{O}A_{O}$	1	
			<u>201</u>	T _O C		
			15D 202	$g_{S} c_{S} a_{S} c_{S} a_{S} g_{S} t_{S} t_{S} g_{S} a_{S} a_{S} a_{S} a_{S} a_{S} c_{S} a_{S} t_{S} c$		
			15E 203	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}c$	83	78
1	16	GATTCAAATCTGGCGG	16A 204	$G_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}G$		
			16B 205	$G_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}g$	1	
			16C 206	$G_{\mathbf{O}}^{\mathbf{A}} G_{\mathbf{O}}^{\mathbf{T}} G_{\mathbf{O}}^{\mathbf{C}} G_{\mathbf{S}}^{\mathbf{a}} G_{\mathbf{S}}^{\mathbf{a}} G_{\mathbf{S}}^{\mathbf{a}} G_{\mathbf{S}}^{\mathbf{c}} G_{\mathbf{S}}^{\mathbf{c}} G_{\mathbf{S}}^{\mathbf{c}} G_{\mathbf{O}}^{\mathbf{C}} G_{\mathbf{O}}^{\mathbf{C}}$	1	
			16D	$\begin{bmatrix} G_{\mathbf{O}}G \\ g_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}g \end{bmatrix}$		
17	12	TOOCA A COCCTOCOCC	207	T.C.C.C.	-	
17	17	TGCCAACGGGTCCCGC	17A 208	$\left \begin{array}{c} \mathbf{T_sG_sC_s}\mathbf{C_s}\mathbf{a_s}\mathbf{a_s}\mathbf{c_s}\mathbf{g_s}\mathbf{g_s}\mathbf{g_s}\mathbf{t_s}\mathbf{c_s}\mathbf{C_s}\mathbf{C_s}\mathbf{G_s}\mathbf{C} \\ \end{array} \right $		
			17B 209	$T_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}c$	1	
			17C		1	
			<u>210</u>	GOC		
			17D 211	$t_{S}g_{S}c_{S}c_{S}a_{S}a_{S}a_{S}c_{S}g_{S}g_{S}g_{S}t_{S}c_{S}c_{S}c_{S}c_{S}g_{S}c$		
33	18	CCGCCGCCGCCACCTC	18A 212	$C_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf$	1	
			18B 213	$C_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}c$		

	, -		1	
			18C	$\left \begin{array}{c} \mathbf{C_{O}C_{O}G_{O}C_{O}c_{s}g_{s}c_{s}c_{s}g_{s}c_{s}c_{s}a_{s}C_{O}C_{O}} \end{array} \right $
			214	$T_{\mathbf{O}}^{\mathbf{C}}$
			18D	$c_s c_s g_s c_s c_s g_s c_s c_s g_s c_s c_s a_s c_s c_s t_s c$
			215	
49	19	CGTCGGGGCACCCATG	19A	$C_sG_sT_sC_sg_sg_sg_sg_sc_sa_sc_sc_sC_sA_sT_sG$
			216	
			19B	$C_sG_sT_sC_sg_sg_sg_sg_sg_sc_sa_sc_sc_sC_sA_sT_sg$
			217	
			19C	$\left[\begin{array}{ccc} C_{\mathbf{O}}G_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{O}}A_{\mathbf{O}} \end{array} \right]$
			<u>218</u>	T _O G
	1		19D	$c_s g_s t_s c_s g_s g_s g_s g_s c_s a_s c_s c_s c_s a_s t_s g$
			219	0-0.0 0-0-0-0-0 0 0 0 0 0 0 0
65	20	GCCAGGCAGGGGCAA	20A	$G_sC_sC_sA_sg_sg_sc_sa_sg_sg_sg_sg_sG_sC_sA_sA$
			220	2 2 3 3-3-3 3 3-3-3-3 3 3
			20B	$G_sC_sC_sA_sg_sg_sg_sg_sg_sg_sg_sG_sC_sA_sa$
			221	
			20C	$ G_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}G_{\mathbf{O}}C_{\mathbf{O}} $
			<u>222</u>	A _O A
			20D	g _s c _s c _s a _s g _s g _s c _s a _s g _s g _s g _s g _s g _s g _s c _s a _s a
			223	
81	21	TCCTTGAGAAAGGGCT	21A	$T_sC_sC_sT_st_sg_sa_sg_sa_sa_sg_sG_sG_sC_sT$
			224	
			21B	$T_sC_sC_sT_st_sg_sa_sg_sa_sa_sg_sG_sG_sC_st$
	<u> </u>		225	
			21C	$\left \mathbf{T_{O}C_{O}C_{O}T_{O}t_{s}g_{s}a_{s}g_{s}a_{s}a_{s}a_{s}g_{s}G_{O}G_{O}} \right $
J			<u>226</u>	COT
	1		21D	$t_s c_s c_s t_s t_s g_s a_s g_s a_s a_s g_s g_s g_s c_s t$
	<u>L</u>		227	0 0 0 0 0 0 0 0 0 0 0 0 0 0
97	22	TGTAGAGATGCGGTGG	22A	$T_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}A_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}G_{\mathbf{s}}G$
			228	
			22B	$T_sG_sT_sA_sg_sa_sg_sa_st_sg_sc_sg_sG_sT_sG_sg$
			229	
			22C	$T_{\mathbf{O}}G_{\mathbf{O}}T_{\mathbf{O}}A_{\mathbf{O}}g_{s}a_{s}g_{s}a_{s}t_{s}g_{s}c_{s}g_{s}G_{\mathbf{O}}T_{\mathbf{O}}$
			<u>230</u>	$G_{\mathbf{O}}$
			22D	$t_s g_s t_s a_s g_s a_s g_s a_s t_s g_s c_s g_s g_s t_s g_s g$
	1		231	202 22022022.20220202.2020
113	23	AGGGCCAGTTCTTGAA	23A	$A_sG_sG_sG_sc_sc_sa_sg_st_st_sc_st_sT_sG_sA_sA$
			232	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

			23B	$A_sG_sG_sG_sC_sC_sA_sG_st_sT_sG_sA_sA_s$
			233	-2-2-3-3-2-2-2-3-3-3-3-3-3-3-3-3-3-3-3-
			23€	$A_OG_OG_OG_OC_SC_Sa_SG_St_St_SC_St_ST_OG_OA$
			<u>234</u>	O ^A
			23D	$a_s g_s g_s g_s c_s c_s a_s g_s t_s t_s c_s t_s t_s g_s a_s a_s$
			235	
129	24	GCGCAGCCCTCCAAGA	24A	$G_sC_sG_sC_sa_sg_sc_sc_sc_st_sc_sc_sA_sA_sG_sA$
			236	
			24B	$G_sC_sG_sC_sa_sg_sc_sc_sc_st_sc_sc_sA_sA_sG_sa$
			237	
			24C	$G_{\mathbf{O}}C_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{O}}A_{\mathbf{O}}$
			238	G _O A
			24D	$g_s c_s g_s c_s a_s g_s c_s c_s c_s c_s c_s c_s a_s a_s g_s a$
			239	
145	25	CCGCTCCGGGGTGCAG	25A	$C_sC_sG_sC_st_sc_sc_sg_sg_sg_st_sG_sC_sA_sG$
			240	
			25B	$C_sC_sG_sC_st_sc_sc_sg_sg_sg_st_sG_sC_sA_sg$
	ļ	Mary R .	241	
			25C	$C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf$
			242	A _O G
			25D	$c_s c_s g_s c_s t_s c_s c_s g_s g_s g_s g_s t_s g_s c_s a_s g$
			243	
161	26	AGCCAGCCTCGGCCAT	26A	$A_sG_sC_sC_sa_sg_sc_sc_st_sc_sg_sg_sC_sC_sA_sT$
		,	244	
			26B	$A_sG_sC_sC_sa_sg_sc_sc_st_sc_sg_sg_sC_sC_sA_st$
			245	
			26C	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$
			<u>246</u>	A _O T
			26D	$a_s g_s c_s c_s a_s g_s c_s c_s t_s c_s g_s g_s c_s c_s a_s t$
			247	
177	27	GTGGGGCAGTGGATGA	27A	$G_sT_sG_sG_sg_sg_sc_sa_sg_st_sg_sg_sA_sT_sG_sA$
			248	
			27B	$G_sT_sG_sG_sg_sg_sc_sa_sg_st_sg_sg_sA_sT_sG_sa$
			249	
			27C	$G_{\mathbf{O}}T_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}A_{\mathbf{O}}T_{\mathbf{O}}$
			<u>250</u>	$G_{\mathbf{O}}^{\mathbf{A}}$
_			27D	$g_s t_s g_s g_s g_s g_s c_s a_s g_s t_s g_s g_s a_s t_s g_s a$
			<u>251</u>	

100	120	CTCTCCCTTCTC+	Lacı	I a m a m
193	28	GTCTGGCTCGTTCTCA	28A 252	$G_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{A}$
			28B 253	$G_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}a$
	 		28C	$G_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}g_{s}g_{s}c_{s}t_{s}c_{s}g_{s}t_{s}t_{s}C_{\mathbf{O}}T_{\mathbf{O}}C$
			254	
			<u> </u>	OA
•			28D	$g_s t_s c_s t_s g_s g_s c_s t_s c_s g_s t_s t_s c_s t_s c_s a$
	-		255	
209	29	AGAAACACTGGGCCAA	29A	$A_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}A$
			256	
			29B	$A_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}A_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}a$
	-		257	A C A A
			29C	$\left \begin{array}{c} \mathbf{A_O} \mathbf{G_O} \mathbf{A_O} \mathbf{A_O} \mathbf{a_S} \mathbf{c_S} \mathbf{a_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{g_S} \mathbf{g_S} \mathbf{C_O} \mathbf{C_O} \end{array} \right $
			<u>258</u>	A _O A
			29D	$a_s g_s a_s a_s a_s c_s a_s c_s t_s g_s g_s g_s c_s c_s a_s a$
			259	
225	30	AGCTCCTTGAAGCAGA	30A	$A_sG_sC_sT_sc_sc_st_st_sg_sa_sa_sg_sC_sA_sG_sA$
	ļ		<u>260</u>	
			30B	$\left \mathbf{A_sG_sC_sT_sc_sc_st_st_sg_sa_sa_sg_sC_sA_sG_sa} \right $
			<u>261</u>	
	Ì		30C	$A_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{O}}A_{\mathbf{O}}$
			<u>262</u>	G _O A
			30D	$a_s g_s c_s t_s c_s c_s t_s t_s g_s a_s a_s g_s c_s a_s g_s a$
			263	
241	31	TGGCTCCCAGCCTTCC	31A	$T_sG_sG_sC_st_sc_sc_sc_sc_sa_sg_sc_sc_sT_sT_sC_sC$
	ļ		<u>264</u>	
			31B	$T_sG_sG_sC_st_sc_sc_sc_sa_sg_sc_sc_sT_sT_sC_sc$
			265	
			31C	$T_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{C}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{C}}G_{\mathbf{O}}G_{\mathbf{O}}$
			<u>266</u>	COC
			31D.	$t_s g_s g_s c_s t_s c_s c_s c_s a_s g_s c_s c_s t_s t_s c_s c$
			267	
257	32	CTATGGGGTCGTCATC	32A	$C_sT_sA_sT_sg_sg_sg_sg_st_sc_sg_st_sC_sA_sT_sC$
			268	
	1		32B	$C_sT_sA_sT_sg_sg_sg_sg_st_sc_sg_st_sC_sA_sT_sc$
			269	
			32C	$C_{\mathbf{O}} T_{\mathbf{O}} A_{\mathbf{O}} T_{\mathbf{O}} g_{s} g_{s} g_{s} g_{s} t_{s} c_{s} g_{s} t_{s} C_{\mathbf{O}} A_{\mathbf{O}}$
			<u>270</u>	T _O C
	L	<u> </u>		L_ ``

				T
			32D 271	$c_s t_s a_s t_s g_s g_s g_s g_s t_s c_s g_s t_s c_s a_s t_s c$
273	33	TGCTTTTTATGTTCCT	33A	$T_sG_sC_sT_st_st_st_st_sa_st_sg_st_sT_sC_sC_sT$
			272	-2-2-2-22-22-2-2-2
			33B	$T_sG_sC_sT_st_st_st_st_st_st_sg_st_sT_sC_sC_st$
			273	2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 .
·			33C	$T_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}T_{\mathbf{O}}C_{\mathbf{O}}C$
			<u>274</u>	\mathbf{o}^{T}
			33D	t _s g _s c _s t _s t _s t _s t _s t _s t _s a _s t _s g _s t _s t _s c _s c _s t
			275	508 8 8 8 8 8 8 8 8 8 8 8 8 8 8
289	34	AGCGCAACCGGACGAA	34A	$A_sG_sC_sG_sc_sa_sa_sc_sc_sg_sg_sa_sC_sG_sA_sA$
			276	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
			34B	$A_sG_sC_sG_sc_sa_sa_sc_sc_sg_sg_sa_sC_sG_sA_sa$
			277	3 3 3 3 3 3 3 3 3 3 3 3 3
			34C	$\mathbf{A_O}\mathbf{G_O}\mathbf{C_O}\mathbf{G_O}\mathbf{c_S}\mathbf{a_S}\mathbf{a_S}\mathbf{c_S}\mathbf{c_S}\mathbf{g_S}\mathbf{g_S}\mathbf{a_S}\mathbf{C_O}\mathbf{G_O}$
	-		278	A _O A
	-		10.45	
			34D	$a_S g_S c_S g_S c_S a_S a_S c_S c_S g_S g_S a_S c_S g_S a_S a_S a_S a_S a_S a_S a_S a_S a_S a$
305	35	TCTTGACAGAAAGGAA	279	
303	33	ICIIGACAGAAAGGAA	35A	$T_sC_sT_sT_sg_sa_sc_sa_sg_sa_sa_sG_sG_sA_sA$
<u> </u>	 		280	TOTT
			35B 281	$T_sC_sT_sT_sg_sa_sc_sa_sg_sa_sa_sG_sG_sA_sa$
-	-		35C	T C T T C C
				$\left \begin{array}{c} T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}T_{\mathbf{O}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{O}}G_{\mathbf{O}} \end{array} \right $
	1		<u>282</u>	AOA
			35D	t _S c _S t _S t _S g _S a _S c _S a _S g _S a _S a _S a _S g _S g _S a _S a
			283	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
321	36	AATTCTTCAAACTGCT	36A	$A_sA_sT_sT_sc_st_st_sc_sa_sa_sa_sc_sT_sG_sC_sT$
			<u>284</u>	
			36B	$A_sA_sT_sT_sc_st_st_sc_sa_sa_sa_sc_sT_sG_sC_st$
			285	
			36C	$A_{\mathbf{O}}A_{\mathbf{O}}T_{\mathbf{O}}T_{\mathbf{O}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}T_{\mathbf{O}}G_{\mathbf{O}}C$
			<u>286</u>	$ _{\mathbf{O}^{\mathbf{T}}}$
-			36D	$a_s a_s t_s t_s c_s t_s t_s c_s a_s a_s a_s c_s t_s g_s c_s t$
			287	3 3 3 3 3 3 3 3 3 3 3 5 3 5 5
337	37	AAATTCACCAAGGGTT	37A	$A_sA_sA_sT_st_sc_sa_sc_sc_sa_sa_sG_sG_sG_sT_sT$
			288	
			37B	$A_sA_sA_sT_st_sc_sa_sc_sc_sa_sa_sG_sG_sG_sT_st$
L =			289	

290 ToT ToT ToToToToToToToToToToToToT		1		37C	AcAcAcTot CacCaaa GoGo
37B					$\mathbf{A_O A_O A_O T_O t_s c_s a_s c_s c_s a_s a_s g_s G_O G_O}$
291					101
383				1	$a_s a_s a_s t_s t_s c_s a_s c_s c_s a_s a_s g_s g_s g_s t_s t$
292 38B 293 294 294 294 294 295					
38B 293	353	38	CTCTGTCCAGTTTCAA	38A	$C_sT_sC_sT_sg_st_sc_sc_sa_sg_st_st_sT_sC_sA_sA$
293 38C				292	
293 386 294				38B	$C_sT_sC_sT_sg_st_sc_sc_sa_sg_st_st_sT_sC_sA_sa$
294 OA OA OBS \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$				293	
294 OA 38D Cstscstsgstscscsasgstststscsasa 295 295 295 295 295 295 295 295 295 295 295 295 295 295 295 295 295 295 296 296 296 296 298 297 296 298 297 298 297 298 299 298 298 299 298 298 299 298 2				38C	$C_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}g_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}T_{\mathbf{O}}C_{\mathbf{O}}A$
38D 295				<u>294</u>	
295		+		200	
399 TTGTTCTTGGCTCTTT 39A 296 296 39B TsTs_Gs_Ts_ts_cs_ts_ts_gs_gs_cs_ts_Cs_Ts_Ts_T 296 39B 297 39B 297 39C ToToGoTots_cs_ts_ts_gs_gs_cs_ts_CoToT 298 0T 39D ts_ts_gs_ts_ts_cs_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_gs_cs_ts_ts_ts_ts_gs_ts_ts_ts_gs_ts_ts_ts_gs_cs_ts_ts_ts_ts_gs_cs_ts_ts_ts_ts_gs_cs_ts_ts_ts_ts_gs_cs_ts_ts_ts_ts_gs_cs_ts_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_cs_ts_ts_ts_gs_ts_ts_ts_gs_ts_ts_ts_ts_gs_ts_ts_ts_ts_gs_ts_ts_ts_ts_gs_ts_ts_ts_ts_gs_ts_ts_ts_ts_gs_ts_ts_ts_ts_ts_ts_ts_ts_ts_ts_ts_ts_ts				1	csiscsisgsiscscsasgsisiscsasa
296	360	30	TTCTTCTTCCCTCTTT		TTCT+0++000+CTTT
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	309		Trafferradeletti		Is Is Gs Is Is Cs Is Is Gs Is
297 39C 39C TOTOGOTOtscststsgsgscstsCOTOT 298 OT OT OT OT OT OT OT O		+-			TTCT++++
39C 298 OT OT OT OT OT OT OT O					IsIsGsIsIsGsIsIsgsgsCsIsCsIsIsI
298 OT OT OT STSTS SESS STS OT OT		+			TTCTCT
39D					$\begin{bmatrix} \mathbf{1010GO1Ot_{S}c_{S}t_{S}t_{S}g_{S}g_{S}c_{S}t_{S}CO1O1} \end{bmatrix}$
385 40 GGTTTCCTTTGCAATT 40A 300 40B 301 40E 301 40E 302 40F 302 40F 303 40F 304 40F 305 40F 305		ŀ		298	\mathbf{o}^{T}
299				39D	tctcgctctccctctcgcgccctcctct
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				299	3 30 3 3 3 30 30 3 3 3 3 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	385	40	GGTTTCCTTTGCAATT	4 0A	$G_{c}G_{c}T_{c}T_{c}t_{c}c_{c}c_{c}t_{c}t_{c}t_{c}g_{c}c_{c}A_{c}A_{c}T_{c}T$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				300	3 3 3 3 3 3 3 3 3 3 3 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				40B	G _s G _s T _s T _s t _s c _s c _s t _s t _s t _s g _s c _s A _s A _s T _s t
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				<u>301</u>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				40C	GOGOTOTOtececetetetegeceAOAOT
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				<u>302</u>	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				100	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
304	401	41	CALALCALACANA VANCANA		O M M M O M M
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	401	41	CITICITCHALIGH		C _S 1 _S 1 _S 1 _S c _S t _S t _S c _S t _S t _S a _S t _S 1 _S G _S 1 _S 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		-			O m m m
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					C _S T _S T _S C _S t _S t _S c _S t _S t _S a _S t _S T _S G _S T _S t
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		+			C T T C T
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					COlOlOlOcststscststsastsloGOl
				306	$ \mathbf{o}^{T} $
		†		41D	CatatataCatataCatataCatataCatat
417 42 GCAGTTTCCTCAAATT $42A$ $G_sC_sA_sG_st_st_st_sc_sc_st_sc_sa_sA_sA_sT_sT$			*		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	417	42	GCAGTTTCCTCAAATT		G _c C _c A _c G _c t _c t _c t _c c _c t _c c _c t _c c _a a _c A _c A _c T _c T
					- 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5

	T		42B	$G_sC_sA_sG_st_st_st_sc_sc_st_sc_sa_sA_sA_sT_st$
			309	SS SUSSISISISISISISISISISISISISI
	†	 	42C	$G_{O}C_{O}A_{O}G_{O}t_{s}t_{s}t_{s}c_{s}c_{s}t_{s}c_{s}a_{s}A_{O}A_{O}T$
			<u>310</u>	OT
			4 2D	<u> </u>
			311	$g_{\mathbf{s}} c_{\mathbf{s}} a_{\mathbf{s}} g_{\mathbf{s}} t_{\mathbf{s}} t_{\mathbf{s}} c_{\mathbf{s}} c_{\mathbf{s}} c_{\mathbf{s}} t_{\mathbf{s}} c_{\mathbf{s}} a_{\mathbf{s}} a_{\mathbf{s}} a_{\mathbf{s}} t_{\mathbf{s}} t$
433	43	ACGGCGCACTTTCTTC	43A	$A_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}g_{\mathbf{s}}C_{\mathbf{s}}a_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}$
			312	115050505050505050505050505050505050505
	†		43B	$A_sC_sG_sG_sc_sg_sc_sa_sc_st_st_st_sC_sT_sT_st$
			313	3-3-3-3-505-5-5-5-5-5-5-5-5
	1		43C	$\mathbf{A_{O}C_{O}G_{O}G_{O}c_{s}g_{s}c_{s}a_{s}c_{s}t_{s}t_{s}t_{s}C_{O}T_{O}T}$
			314	$ _{\mathbf{O}^{C}}$
	1		43D	
			315	$\begin{bmatrix} a_{S} c_{S} g_{S} g_{S} c_{S} g_{S} c_{S} a_{S} c_{S} t_{S} t_{S} t_{S} c_{S} t_{S} t_{S} c_{S} t_{S} c_{S} t_{S} c_{S} c_{S}$
449	44	CCAGCTGCTCGATGGC	44A	$C_sC_sA_sG_sc_st_sg_sc_st_sc_sg_sa_sT_sG_sG_sC$
			316	
			44B	$C_sC_sA_sG_sc_st_sg_sc_st_sc_sg_sa_sT_sG_sG_st$
			317	3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5
			44C	$C_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf{S}}S_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}S_{\mathbf{S}}S_{\mathbf{S}}S_{\mathbf{S}}S_{\mathbf{S}}S_{\mathbf{S}}S_{\mathbf{O}}S_{\mathbf{O}}$
			<u>318</u>	$ G_{\mathbf{O}}C $
	<u> </u>		44D	$c_s c_s a_s g_s c_s t_s g_s c_s t_s c_s g_s a_s t_s g_s g_s c$
			319	-2-2-202-2-202-2-202-2-202-2
465	45	CCTCAATCCATGGCAG	45A	$C_sC_sT_sC_sa_sa_st_sc_sc_sa_st_sg_sG_sC_sA_sG$
			320	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
			45B	$C_sC_sT_sC_sa_sa_st_sc_sc_sa_st_sg_sG_sC_sA_sg$
	ļ		321	
			45C	$C_{\mathbf{O}}C_{\mathbf$
			322	$_{\mathbf{O}^{\mathbf{G}}}$
	1		45D	$c_s c_s t_s c_s a_s a_s t_s c_s c_s a_s t_s g_s g_s c_s a_s g$
			323	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
481	46	CAGCTCCGGCCAGAGG	4 6A	$C_sA_sG_sC_st_sc_sg_sg_sc_sc_sa_sG_sA_sG_sG$
			324	
			46B	$C_sA_sG_sC_st_sc_sc_sg_sg_sc_sc_sa_sG_sA_sG_sg$
	ļ		325	
			46C	$\begin{bmatrix} C_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{O}}A_{\mathbf{O}} \end{bmatrix}$
	1		<u>326</u>	$G_{O}G$
	†		4 6D	$c_s a_s g_s c_s t_s c_s c_s g_s g_s c_s c_s a_s g_s a_s g_s g$
			<u>327</u>	3 5-3 3 3 5 5-3-3 3 5 5-3-

497	47	CCACTCTGGGACCAGG	47A 328	$\boxed{ \textbf{C}_{\textbf{S}}\textbf{C}_{\textbf{S}}\textbf{A}_{\textbf{S}}\textbf{C}_{\textbf{S}}\textbf{t}_{\textbf{S}}\textbf{c}_{\textbf{S}}\textbf{t}_{\textbf{S}}\textbf{g}_{\textbf{S}}\textbf{g}_{\textbf{S}}\textbf{g}_{\textbf{S}}\textbf{g}_{\textbf{S}}\textbf{a}_{\textbf{S}}\textbf{c}_{\textbf{S}}\textbf{C}_{\textbf{S}}\textbf{A}_{\textbf{S}}\textbf{G}_{\textbf{S}}\textbf{G} }$
	\vdash	 		
			47B 329	$C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}G_{\mathbf{s}}g$
_			47C	$C_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{O}}C_{\mathbf{O}}$
			330	
				$G_{O}G$
			47D	$c_s c_s a_s c_s t_s c_s t_s g_s g_s g_s a_s c_s c_s a_s g_s g$
			331	3 5 5 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
513	48	CCTGGAAGTGGTGCAG	48A	$C_sC_sT_sG_sg_sa_sa_sg_st_sg_sg_st_sG_sC_sA_sG$
			332	33233888888888888888888888888888888888
	 		48B	CCTCasastastCCAs
			333	$C_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}g$
		 		
			4 8C	$C_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}G_{\mathbf{O}}g_{s}a_{s}a_{s}g_{s}t_{s}g_{s}g_{s}t_{s}G_{\mathbf{O}}C_{\mathbf{O}}$
			334	A _O G
			4 8D	$c_s c_s t_s g_s g_s a_s a_s g_s t_s g_s g_s t_s g_s c_s a_s g$
			335	
529	49	GCACCAGGGAATAAAC	49A	$G_sC_sA_sC_sc_sa_sg_sg_sg_sa_sa_st_sA_sA_sC$
			336	-2
	†		49B	$G_sC_sA_sC_sc_sa_sg_sg_sg_sa_sa_st_sA_sA_sA_sc$
			337	S S S S S S S S S S S S S S S S S S S
	 		49C	C-C-A-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C
				$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
			338	A _O C
			4 9D	$g_s c_s a_s c_s c_s a_s g_s g_s g_s a_s a_s t_s a_s a_s c$
			339	
545	50	CACAGGAAGGCTGGTG	50A	$C_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}G$
			340	
			50B	$C_sA_sC_sA_sg_sg_sa_sa_sg_sg_sc_st_sG_sG_sT_sg$
	İ		341	
			50C	$C_{\mathbf{O}}A_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}G_{\mathbf{O}}G_{\mathbf{O}}$
			342	
	<u> </u>		<u> </u>	T _O G
	1		50D	$c_s a_s c_s a_s g_s g_s a_s a_s g_s g_s c_s t_s g_s g_s t_s g$
			343	
561	51	ACATTGCTAAGGGGCC	51A	$A_sC_sA_sT_st_sg_sc_st_sa_sg_sg_sG_sG_sC_sC$
			344	9 9 9 9 9 9 9 9 9 8 8 8 8 9 8 8 8 8 8 8
	1		51B	$A_sC_sA_sT_st_sg_sc_st_sa_sa_sg_sg_sG_sG_sC_sc$
			345	**************************************
			51C	$A_{O}C_{O}A_{O}T_{O}t_{S}g_{S}c_{S}t_{S}a_{S}a_{S}g_{S}g_{S}G_{O}G_{O}$
			346	
			<u> </u>	COC

		· · · · · · · · · · · · · · · · · · ·		
			51D 347	$a_s c_s a_s t_s t_s g_s c_s t_s a_s a_s g_s g_s g_s g_s c_s c$
577	52	GATCTCCTTTCCTAAG	52A	$G_sA_sT_sC_st_sc_sc_st_st_sc_sc_sT_sA_sA_sG$
			348	3. 13 1 5 3. 5 3. 5 3. 5 3. 5 3. 5 3. 5
	 		52B	$G_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{g}$
İ			349	-3333333333333-
			52C	$G_{\mathbf{O}}A_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}T_{\mathbf{O}}A_{\mathbf{O}}A$
			<u>350</u>	o ^G
			52D	g _s a _s t _s c _s t _s c _s c _s t _s t _s t _s c _s c _s t _s a _s a _s g
			<u>351</u>	
593	53	CTAATTTGAAAATGTT	53A	$C_sT_sA_sA_st_st_st_sg_sa_sa_sa_sa_sT_sG_sT_sT$
			<u>352</u>	
			53B	$C_sT_sA_sA_st_st_st_sg_sa_sa_sa_sa_sT_sG_sT_st$
			353	
			53C	$C_{\mathbf{O}}T_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}T_{\mathbf{O}}G_{\mathbf{O}}T$
			<u>354</u>	\mathbf{O}^{T}
	 		53D	$c_{s}t_{s}a_{s}a_{s}t_{s}t_{s}t_{s}g_{s}a_{s}a_{s}a_{s}a_{s}t_{s}g_{s}t_{s}t$
			355	ostsusuststsesusususustsestst
609	54	AGCACAGTTGAAACAT	54A	$A_sG_sC_sA_sc_sa_sg_st_st_sg_sa_sa_sA_sC_sA_sT$
			356	1-8-8-2-2-2-3-3-2-3-3-8-8-8-8-
			54B	$\mathbf{A_sG_sC_sA_s}\mathbf{c_s}\mathbf{a_s}\mathbf{g_s}\mathbf{t_s}\mathbf{t_s}\mathbf{g_s}\mathbf{a_s}\mathbf{a_s}\mathbf{A_s}\mathbf{C_s}\mathbf{A_s}\mathbf{t}$
			357	3-3-3-3 5 505 5 5 5 5 5 5
			54C	$\mathbf{A_O}^{\mathbf{G_O}}^{\mathbf{C_O}} \mathbf{A_O}^{\mathbf{c_S}} \mathbf{a_S} \mathbf{g_S}^{\mathbf{t_S}} \mathbf{t_S}^{\mathbf{g_S}} \mathbf{a_S}^{\mathbf{a_S}} \mathbf{a_S}^{\mathbf{A_O}} \mathbf{C_O}$
	l		<u>358</u>	$A_{\mathbf{O}}^{T}$
	-		54D	
			359	$a_{S}g_{S}c_{S}a_{S}c_{S}a_{S}g_{S}t_{S}t_{S}g_{S}a_{S}a_{S}a_{S}a_{S}c_{S}a_{S}t$
625	55	TTCAAGACAAAACAGG	55A	$T_sT_sC_sA_sa_sg_sa_sc_sa_sa_sa_sC_sA_sG_sG$
			360	-8-8-8-18-85-8-8-8-8-8-8-8-8-8-8-8-8-8-8
	<u> </u>		55B	$T_sT_sC_sA_sa_sg_sa_sc_sa_sa_sa_sC_sA_sG_sg$
			361	3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	1		55C	$T_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{O}}A_{\mathbf{O}}$
			<u>362</u>	$G_{\mathbf{O}}^{\mathbf{G}}$
<u> </u>	-		55D	$t_s t_s c_s a_s a_s g_s a_s c_s a_s a_s a_s c_s a_s g_s g$
			363	`\$`\$`\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\
641	56	CACCTCTGGTGCCACT	56A	$C_sA_sC_sC_st_sc_st_sg_sg_st_sg_sc_sC_sA_sC_sT$
			364	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
			56B	$C_sA_sC_sC_st_sc_st_sg_sg_st_sg_sc_sC_sA_sC_st$
	<u></u>		<u>365</u>	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

			56C 366	$\begin{bmatrix} C_{\mathbf{O}} A_{\mathbf{O}} C_{\mathbf{O}} C_{\mathbf{O}} t_{\mathbf{S}} c_{\mathbf{S}} t_{\mathbf{S}} g_{\mathbf{S}} g_{\mathbf{S}} t_{\mathbf{S}} g_{\mathbf{S}} c_{\mathbf{S}} C_{\mathbf{O}} A_{\mathbf{O}} C \\ \mathbf{O}^{T} \end{bmatrix}$
		<u>-</u>	56D 367	$c_s a_s c_s c_s t_s c_s t_s g_s g_s t_s g_s c_s c_s a_s c_s t$
657	57	GCTGCACAGGCAGAAG	57A 368	$G_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}G$
			57B 369	$G_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}g$
			57C 370	$\mathbf{G_O}\mathbf{C_O}\mathbf{T_O}\mathbf{G_O}\mathbf{c_S}\mathbf{a_S}\mathbf{c_S}\mathbf{a_S}\mathbf{g_S}\mathbf{g_S}\mathbf{c_S}\mathbf{a_S}\mathbf{G_O}\mathbf{A_O}$ $\mathbf{A_O}\mathbf{G}$
			57D 371	$g_{S} c_{S} t_{S} g_{S} c_{S} a_{S} c_{S} a_{S} g_{S} g_{S} c_{S} a_{S} g_{S} a_{S} a_{S} a_{S} g_{S}$
673	58	GTTACCAGCAGCACCC	58A 372	$G_{\mathbf{S}}T_{\mathbf{S}}T_{\mathbf{S}}A_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C$
			58B 373	$\mathbf{G_{S}T_{S}T_{S}A_{S}}\mathbf{c_{S}}\mathbf{c_{S}}a_{S}\mathbf{g_{S}}\mathbf{c_{S}}a_{S}\mathbf{g_{S}}\mathbf{c_{S}}\mathbf{A_{S}}\mathbf{C_{S}}\mathbf{C_{S}}\mathbf{c_{S}}$
			58C 374	$\begin{vmatrix} \mathbf{G_OT_OT_OA_O} \mathbf{c_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{c_S} \mathbf{A_OC_O} \\ \mathbf{C_OC} \end{vmatrix}$
			58D 375	$g_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}$
689	59	GAGAGAAGCAGCCACT	59A 376	$G_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}G_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}a_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{T}$
			59B 377	$G_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}G_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}C_{\mathbf{S}}t$
			59C 378	$\begin{vmatrix} G_{\mathbf{O}} \mathbf{A}_{\mathbf{O}} G_{\mathbf{O}} \mathbf{A}_{\mathbf{O}} \mathbf{g}_{\mathbf{S}} \mathbf{a}_{\mathbf{S}} \mathbf{a}_{\mathbf{S}} \mathbf{g}_{\mathbf{S}} \mathbf{c}_{\mathbf{S}} \mathbf{a}_{\mathbf{S}} \mathbf{g}_{\mathbf{S}} \mathbf{c}_{\mathbf{S}} \mathbf{C}_{\mathbf{O}} \mathbf{A}_{\mathbf{O}} \\ C_{\mathbf{O}} \mathbf{T} \end{vmatrix}$
			59D 379	$g_S a_S g_S a_S g_S a_S a_S g_S c_S a_S g_S c_S c_S a_S c_S t$
705	60	AAAAAAGAGAGAGAGA	60A 380	$\mathbf{A_{S}A_{S}A_{S}A_{S}} \mathbf{a_{S}} a_$
			60B 381	$\mathbf{A_{S}A_{S}A_{S}A_{S}a_{S}a_{S}g_{S}a_{S}g_{S}a_{S}g_{S}a_{S}G_{S}A_{S}G_{S}a}$
			382	$\begin{vmatrix} \mathbf{A_O A_O A_O A_O a_S a_S g_S a_S g_S a_S g_S a_S G_O A_O} \\ \mathbf{G_O A} \end{vmatrix}$
			60D 383	$a_Sa_Sa_Sa_Sa_Sa_Sg_Sg$
721	61	GCAAAAATGAGCCCCC	61A 384	$G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C$

			T 20 7	
			61B 385	$\left \begin{array}{c} \mathbf{G_s C_s A_s A_s a_s a_s a_s t_s g_s a_s g_s c_s C_s C_s C_s c} \end{array} \right $
			61C	$G_{O}C_{O}A_{O}A_{O}a_{S}a_{S}a_{S}t_{S}g_{S}a_{S}g_{S}c_{S}C_{O}C_{O}$
			<u>386</u>	C_0 C
			61D	$g_s c_s a_s a_s a_s a_s a_s t_s g_s a_s g_s c_s c_s c_s c_s c_s c_s$
			387	
737	62	CCCGGGAATCAAAACA	62A	$C_sC_sC_sG_sg_sg_sa_sa_st_sc_sa_sa_sA_sA_sC_sA$
			388	3 3 3 30505 5 5 5 5 5 5 5
			62B	$C_sC_sC_sG_sg_sg_sa_sa_st_sc_sa_sa_sA_sA_sC_sa$
			389	3 3 3 30505 5 5 5 5 5 5 5 5
			62C	$C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}G_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{O}}A_{\mathbf{O}}$
	İ		390	
	ļ		ļ	COA
			62D	$c_s c_s c_s g_s g_s g_s a_s a_s t_s c_s a_s a_s a_s a_s c_s a$
			391	
753	63	CTTCTCACCTGGTAAG	63A	$C_sT_sT_sC_st_sc_sa_sc_sc_st_sg_sg_sT_sA_sA_sG$
			<u>392</u>	
			63B	$C_sT_sT_sC_st_sc_sa_sc_sc_st_sg_sg_sT_sA_sA_sg$
			393	
			63C	$C_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf$
			394	
	ļ		↓ ̄_	OG
			63D	$c_s t_s t_s c_s t_s c_s a_s c_s c_s t_s g_s g_s t_s a_s a_s g$
			395	
769	64	CCTTCTTCCTCCCTCA	64A	$C_sC_sT_sT_sc_st_st_sc_sc_st_sc_sc_sC_sT_sC_sA$
			396	
			64B	$C_sC_sT_sT_sc_st_st_sc_sc_st_sc_sc_sC_sT_sC_sa$
			<u>397</u>	
			64C	$C_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{O}}T_{\mathbf{O}}C$
			<u>398</u>	OA
	 		(15)	
			64D	$c_{s}c_{s}t_{s}t_{s}c_{s}t_{s}t_{s}c_{s}c_{s}c_{s}c_{s}c_{s}c_{s}c_{s}c$
			399	
785	65	AGCAAAAGGGACACTG	65A	$A_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G$
	<u> </u>		400	
			65B	$A_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}g$
			401	
			65C	$A_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{O}}C_{\mathbf{O}}$
			402	T _O G
	 		(50	
			65D	$a_s g_s c_s a_s a_s a_s a_s g_s g_s g_s a_s c_s a_s c_s t_s g$
		L	403	

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801	66	CAAAGCTGTCAGCTCT	66A 404	$C_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}T$
			66B 405	$C_{\mathbf{S}} A_{\mathbf{S}} A_{\mathbf{S}} A_{\mathbf{S}} g_{\mathbf{S}} c_{\mathbf{S}} t_{\mathbf{S}} g_{\mathbf{S}} t_{\mathbf{S}} c_{\mathbf{S}} a_{\mathbf{S}} g_{\mathbf{S}} C_{\mathbf{S}} T_{\mathbf{S}} C_{\mathbf{S}} t$
			66 C 406	$\begin{bmatrix} \mathbf{C_O} \mathbf{A_O} \mathbf{A_O} \mathbf{A_O} \mathbf{g_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{t_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{C_O} \mathbf{T_O} \\ \mathbf{C_O} \mathbf{T} \end{bmatrix}$
			66D 407	$c_{S} a_{S} a_{S} a_{S} g_{S} c_{S} t_{S} g_{S} t_{S} c_{S} a_{S} g_{S} c_{S} t_{S} c_{S} t$
817	67	GCTCTGCCCACGCGAA	67A 408	$G_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}A$
			67B 409	$G_sC_sT_sC_st_sg_sc_sc_sc_sa_sc_sg_sC_sG_sA_sa$
			67C 410	$\begin{bmatrix} \mathbf{G_O} \mathbf{C_O} \mathbf{T_O} \mathbf{C_O} \mathbf{t_S} \mathbf{g_S} \mathbf{c_S} \mathbf{c_S} \mathbf{c_S} \mathbf{a_S} \mathbf{c_S} \mathbf{g_S} \mathbf{C_O} \mathbf{G_O} \\ \mathbf{A_O} \mathbf{A} \end{bmatrix}$
			67D 411	$g_{S}c_{S}t_{S}c_{S}t_{S}g_{S}c_{S}c_{S}c_{S}a_{S}c_{S}g_{S}c_{S}g_{S}a_{S}a$
833	68	ACATTCACTGTGGAAG	68A 412	$\mathbf{A_sC_sA_sT_s} \mathbf{t_s} \mathbf{c_s} \mathbf{a_s} \mathbf{c_s} \mathbf{t_s} \mathbf{g_s} \mathbf{t_s} \mathbf{g_s} \mathbf{G_sA_sA_s} \mathbf{G}$
			68B 413	$A_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}A_{\mathbf{s}}g$
			68C 414	$\begin{vmatrix} \mathbf{A_O} \mathbf{C_O} \mathbf{A_O} \mathbf{T_O} \mathbf{t_S} \mathbf{c_S} \mathbf{a_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{t_S} \mathbf{g_S} \mathbf{G_O} \mathbf{A_O} \mathbf{A} \\ \mathbf{O} \mathbf{G} \end{vmatrix}$
			68D 415	$a_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}g$
849	69	AACATGAGGTCCAGAC	69A 416	$\mathbf{A_s}\mathbf{A_s}\mathbf{C_s}\mathbf{A_s}\mathbf{t_s}\mathbf{g_s}\mathbf{a_s}\mathbf{g_s}\mathbf{g_s}\mathbf{t_s}\mathbf{c_s}\mathbf{c_s}\mathbf{A_s}\mathbf{G_s}\mathbf{A_s}\mathbf{C}$
			69B 417	$A_sA_sC_sA_st_sg_sa_sg_sg_st_sc_sc_sA_sG_sA_sc$
			69C 418	$\begin{vmatrix} \mathbf{A_O} \mathbf{A_O} \mathbf{C_O} \mathbf{A_O} \mathbf{t_S} \mathbf{g_S} \mathbf{a_S} \mathbf{g_S} \mathbf{t_S} \mathbf{c_S} \mathbf{c_S} \mathbf{A_O} \mathbf{G_O} \\ \mathbf{A_O} \mathbf{C} \end{vmatrix}$
			69D 419	$a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c$
865	70	CTGTGACAGCCTCAAC	70A 420	$C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}C$
			70B 421	$C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}c$
			70C <u>422</u>	$\begin{bmatrix} \mathbf{C_OT_OG_OT_Og_sa_sc_sa_sg_sc_sc_st_sC_OA_O} \\ \mathbf{A_OC} \end{bmatrix}$

		T	TECT	
			70D 423	$ c_s t_s g_s t_s g_s a_s c_s a_s g_s c_s c_s t_s c_s a_s a_s c $
881	71	AAGTCCACACTCAGGA	71A	$A_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}A$
			424	2 2 2 2 2 2 2 2 2 2 2 2 3 3 3
			71B	$A_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}a$
			425	3 3 3 3 3 3 3 3 3 3 3 3 3
			71C	$\mathbf{A_O}\mathbf{A_O}\mathbf{G_O}\mathbf{T_O}\mathbf{c_S}\mathbf{c_S}\mathbf{a_S}\mathbf{c_S}\mathbf{a_S}\mathbf{c_S}\mathbf{t_S}\mathbf{c_S}\mathbf{A_O}\mathbf{G_O}$
			426	$G_{\mathbf{O}}\mathbf{A}$
			71D	$a_s a_s g_s t_s c_s c_s a_s c_s a_s c_s t_s c_s a_s g_s g_s a$
	_		427	
897	72	TCAACAGGCACCTGCC	72A	$T_sC_sA_sA_sc_sa_sg_sg_sc_sa_sc_sc_sT_sG_sC_sC$
	<u> </u>		428	
			72B	$T_sC_sA_sA_sc_sa_sg_sg_sc_sa_sc_sc_sT_sG_sC_sc$
	<u> </u>		429	
			72C	$T_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}T_{\mathbf{O}}G_{\mathbf{O}}$
			430	coc
			72D	$t_{s}c_{s}a_{s}a_{s}c_{s}a_{s}g_{s}g_{s}g_{s}c_{s}a_{s}c_{s}c_{s}g_{s}c_{s}c$
	<u> </u>	- 101 101 101 101 101 101 101 101 101 10	431	
913	73	AACCTGCAGCTCAGAT	73A	$A_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}A_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}T$
	 		432	
			73B	$A_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}A_{\mathbf{S}}t$
	-		433	
			73C	$A_{\mathbf{O}}A_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{O}}C_{\mathbf{O}}$
			434	$A_{O}T$
			73D	$a_s a_s c_s c_s t_s g_s c_s a_s g_s c_s t_s c_s a_s g_s a_s t$
			435	
929	74	GGTGTGACAGATAAGG	74A	$G_sG_sT_sG_st_sg_sa_sc_sa_sg_sa_st_sA_sA_sG_sG$
			436	
			74B	$G_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}g$
			437	
			74C	$G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{S}}G_{\mathbf$
			438	GOG
			74D	$g_sg_st_sg_st_sg_sa_sc_sa_sg_sa_st_sa_sa_sg_sg$
	<u> </u>		439	
945	75	CCTCTGAGGAGGCACA	75A	$C_sC_sT_sC_st_sg_sa_sg_sg_sa_sg_sG_sC_sA_sC_sA$
			440	
			75B	$\left C_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}a \right $
			441	

	1	1	75C	$\boxed{\textbf{C}_{\mathbf{O}}\textbf{C}_{\mathbf{O}}\textbf{T}_{\mathbf{O}}\textbf{C}_{\mathbf{O}}\textbf{t}_{\mathbf{S}}\textbf{g}_{\mathbf{S}}\textbf{a}_{\mathbf{S}}\textbf{g}_{\mathbf{S}}\textbf{g}_{\mathbf{S}}\textbf{a}_{\mathbf{S}}\textbf{g}_{\mathbf{S}}\textbf{g}_{\mathbf{S}}\textbf{C}_{\mathbf{O}}\textbf{A}_{\mathbf{O}}}$
			442	C _O A
	 			
			75D	$c_s c_s t_s c_s t_s g_s a_s g_s g_s a_s g_s g_s c_s a_s c_s a$
961	76	ACAACAAAAAAACTGT	443 76A	ACAACaaaaaaaCTCT
701	"	/ TOTALOTALIAN MICTOR	444	$A_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}A_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}G_{\mathbf{s}}T$
· ·			76B	$A_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}t$
			445	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
			76C	$\mathbf{A_{O}C_{O}A_{O}A_{O}c_{S}a_{S}a_{S}a_{S}a_{S}a_{S}a_{S}a_{S}a$
			446	$G_{\mathbf{O}}$ T
	 		76D	$a_s c_s a_s a_s c_s a_s a_s a_s a_s a_s a_s a_s c_s t_s g_s t$
			447	
977	77	AAAACAAAAAAACACA	77A	$A_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}A$
			448	3 3 3 3 3 3 3 3 3 3 3 3
			77B	$A_sA_sA_sA_sc_sa_sa_sa_sa_sa_sa_sC_sA_sC_sa$
	<u> </u>		449	
			77C	$A_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}C_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{O}}A_{\mathbf{O}}$
			<u>450</u>	COA
-			77D	$a_s a_s a_s a_s c_s a_s a_s a_s a_s a_s a_s a_s c_s c_s c_s c_s c_s c_s c_s c_s c_s c$
			<u>451</u>	
993	78	CATCTACCAAAAAAA	78A	$C_sA_sT_sC_st_sa_sc_sc_sa_sa_sa_sA_sA_sA_sA$
			452	
			78B	$C_SA_ST_SC_St_Sa_Sc_Sc_Sa_Sa_Sa_Sa_SA_SA_SA_Sa$
	-	<u> </u>	453	
			78C 454	$C_{\mathbf{O}}^{\mathbf{A}} C_{\mathbf{O}}^{\mathbf{C}} C_{\mathbf{O}}^{\mathbf{C}} C_{\mathbf{S}}^{\mathbf{a}} C_{\mathbf{S}}^{\mathbf{c}} C_{\mathbf{S}}^{\mathbf{a}} C_{\mathbf{S}}^{$
			434	AOA
			78D	$c_s a_s t_s c_s t_s a_s c_s c_s a_s a_s a_s a_s a_s a_s a_s a_s a_s a$
1000	ļ		455	
1009	79	TCACACACAAGTCATG	79A	$T_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}G$
 -	┼		456	TCACacacacacac
			79B 457	$\left \begin{array}{ccc} \mathbf{T_sC_sA_sC_s} \mathbf{a_sc_sa_sc_sa_s} \mathbf{a_sa_sg_st_sC_sA_sT_sg} \end{array} \right $
	 		79C	
			458	
	 			T _O G
			79D	$t_{S}c_{S}a_{S}c_{S}a_{S}c_{S}a_{S}c_{S}a_{S}a_{S}g_{S}t_{S}c_{S}a_{S}t_{S}g$
1025	80	TGTCTCCATTCTCTCA	459 80A	TCTC+000++0+CTC+
1023	80	IGICICOAFICICICA	80A 460	$T_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}A$
	<u> </u>	<u> </u>	1400	

	1	T	Tas=	
			80B 461	$\mathbf{T_sG_sT_sC_s}\mathbf{t_sc_sc_sa_st_st_sc_st_sC_sT_sC_sa}$
• •••	 		80C	T C T C to a a t t a t C T C
			462	$\mathbf{T_{O}G_{O}T_{O}C_{O}t_{S}c_{S}c_{S}a_{S}t_{S}t_{S}c_{S}t_{S}C_{O}T_{O}C}$
			402	OA
			80D	$t_s g_s t_s c_s t_s c_s c_s a_s t_s t_s c_s t_s c_s t_s c_s a$
	<u> </u>		463	
1041	81	GAGGAGCCAGGGACTC	81A	$G_sA_sG_sG_sa_sg_sc_sc_sa_sg_sg_sg_sA_sC_sT_sC$
			464	1
			81B	$G_sA_sG_sG_sa_sg_sc_sc_sa_sg_sg_sg_sA_sC_sT_sc$
	ļ		465	
	1		81C	$G_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}A_{\mathbf{O}}C_{\mathbf{O}}$
			<u>466</u>	T _O C
	<u> </u>		81D	$g_s a_s g_s g_s a_s g_s c_s c_s a_s g_s g_s g_s a_s c_s t_s c$
			467	
1057	82	ATGTTGTTAAACAGTA	82A	$A_sT_sG_sT_st_sg_st_st_sa_sa_sa_sc_sA_sG_sT_sA$
			468	
			82B	$A_sT_sG_sT_st_sg_st_st_sa_sa_sa_sc_sA_sG_sT_sa$
			469	
	l		82C	$\mathbf{A_O}\mathbf{T_O}\mathbf{G_O}\mathbf{T_O}\mathbf{t_s}\mathbf{g_s}\mathbf{t_s}\mathbf{t_s}\mathbf{a_s}\mathbf{a_s}\mathbf{a_s}\mathbf{a_s}\mathbf{c_s}\mathbf{A_O}\mathbf{G_O}\mathbf{T}$
			<u>470</u>	$O^{\mathbf{A}}$
			82D	$a_s t_s g_s t_s t_s g_s t_s t_s a_s a_s a_s c_s a_s g_s t_s a$
			<u>471</u>	
1073	83	ACAAAATAAGAAAGCC	83A	$A_sC_sA_sA_sa_sa_st_sa_sa_sg_sa_sa_sA_sG_sC_sC$
			<u>472</u>	
			83B	$\mathbf{A_sC_sA_sA_s}$ $\mathbf{a_sa_st_sa_sa_sg_sa_sa_sA_sG_sC_sc}$
			473	
			83C	$A_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}a_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{O}}G_{\mathbf{O}}$
			<u>474</u>	c_0c
			83D	$a_s c_s a_s a_s a_s a_s t_s a_s a_s g_s a_s a_s a_s g_s c_s c$
			475	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
1089	84	TGAATTAACAATTCAA	84A	$T_sG_sA_sA_st_st_sa_sa_sc_sa_sa_st_sT_sC_sA_sA$
			476	
			84B	$T_sG_sA_sA_st_st_sa_sa_sc_sa_sa_st_sT_sC_sA_sa$
		·	<u>477</u>	
			84C	ToGoAoAotstsasascsasastsToCoA
			<u>478</u>	O ^A
			045	
			84D	$\left \begin{array}{c} t_S g_S a_S a_S t_S t_S a_S a_S c_S a_S a_S t_S t_S c_S a_S a \end{array} \right $
	<u> </u>		479	

480	1105	85	AGTTTGTGCTATTCTG	85A	$A_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}G$
481				4 <u>80</u>	
481				85B	$A_sG_sT_sT_st_sg_st_sg_sc_st_sa_st_sT_sC_sT_sg$
482 O'O				<u>481</u>	
1121 86 GCTTAGTTTTAATTGT 86A 484 86A 485 86C 485 485 86C 486 485 86C 486 487 86A 488 86C 486 487 86A 488				85C	$A_0G_0T_0T_0t_sg_st_sg_sc_st_sa_st_sT_0C_0T$
1121 86 GCTTAGTTTTAATTGT 86A 484 86B 86B 485 485 486 487 486 487 487 488 487 489 480				482	
1121 86 GCTTAGTTTTAATTGT 86A				05D	
1121 86 GCTTAGTTTTAATTGT 86A 484 86B 485 86C 486 485 86C 486 487 870 486 487 870 486 487 870 486 487 870 487		1			$a_s g_s t_s t_s g_s t_s g_s c_s t_s a_s t_s t_s c_s t_s g$
1137 87 CTTAGAATGGCTTTGT 87A 489 87B 489 489 480 481 482 482 483	1121	06	CCTTA CTTTTA ATTCT		CCTT
S6B	1121	00	GCTTAGTTTTAATTGT		$G_sC_sI_sI_sa_sg_sI_sI_sI_sa_sa_sI_sI_sG_sI$
					C C T T A A A A A T T C A
Sec 486 GOCOTOTOasgststststsaasTOTOG 486 OT					G _S C _S 1 _S 1 _S a _S g _S t _S t _S t _S t _S a _S a _S 1 _S 1 _S G _S t
486 OT		 			C C T T C C
1137 87 CTTAGAATGGCTTTGT 86D 487 487 488					$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
1137 87 CTTAGAATGGCTTTGT 87A 488 87B 489 CsTsTsAsgsasastsgsgscstsTsTsGst 489 87D 490 OT Cststsasgsgscstststsgst 491 CsCGTTTCCCCAATGA 88A 492 CsCsCsGstststscscscscsasAsTsGsa 493 CsCsCsGstststscscscscsasAsTsGsa 493 CsCsCsGstststscscscscscsasAsTsGsa 494 OA 88D 495 CsCACCTGAAGTTCAC 89A 495 TsCsCsAsgsststscscscstsgsasasgstsTsCsAsc 496 TsCsCsAsgsasasgstsTsCsAsc 497 TsCsCsAsgsasgssssssssssssssssssssssssssss				486	$ \mathbf{o}^{T} $
1137 87 CTTAGAATGGCTTTGT 87A 488 488 489				86D	g _c c _c t _c t _c a _c g _c t _c t _c t _c t _c a _c a _c t _c t _c g _c t
				<u>487</u>	
	1137	87	CTTAGAATGGCTTTGT	87A	$C_sT_sT_sA_sg_sa_sa_st_sg_sg_sc_st_sT_sT_sG_sT$
				<u>488</u>	
				87B	$C_sT_sT_sA_sg_sa_st_sg_sg_sc_st_sT_sT_sG_st$
490 OT 0T 0T				489	
				87C	$C_{\mathbf{O}}T_{\mathbf{O}}T_{\mathbf{O}}A_{\mathbf{O}}g_{s}a_{s}a_{s}t_{s}g_{s}g_{s}c_{s}t_{s}T_{\mathbf{O}}T_{\mathbf{O}}G$
1153 88 CCCGTTTCCCCAATGA 88A 492 88B C _S C _S C _S C _S C _S C _S C _S C _S C _S C _S				<u>490</u>	
1153 88 CCCGTTTCCCCAATGA 88A 492				87D	c _c t _c t _c a _c g _c a _c a _c t _c g _c g _c c _c t _c t _c t _c g _c t
492				491	3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
492	1153	88	CCCGTTTCCCCAATGA	88A	C _o C _o C _o C _o t _o t _o t _o t _o t _o c _o c _o c _o c _o a _o A _o T _o G _o A
493				492	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
493				88B	C _c C _c C _c G _c t _c t _c t _c t _c c _c c _c c _c c _c a _c A _c T _c G _c a
494 OA				493	3 3 3 3 3 3 3 3 3 3 3 3
494 OA 88D cscscsgstststscscscscsasastsgsa 495 1169 89 TCCACCTGAAGTTCAC 89A 496 89B TsCscsAscscstsgsasasgstsTsCsAsc 496 89B TsCsCsAscscstsgsasasgstsTsCsAsc 497 89C ToCoCoAocscstsgsasasgstsToCoA				88C	CoCoCoGotetetecececeaeAoToG
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				494	
1169 89 TCCACCTGAAGTTCAC 89A 496 496		-			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
496	1160	-	TOO LOOTO LLOTTO LO		
$\begin{array}{c c} & & & \\ \hline 89B \\ & & \\ \hline 497 \\ \hline \\ & & \\ \hline & &$	1169	89	ICCACCIGAAGITCAC		$\left \mathbf{T_s C_s C_s A_s c_s c_s t_s g_s a_s a_s g_s t_s T_s C_s A_s C} \right $
497 89C T _O C _O C _O A _O c _S c _S t _S g _S a _S a _S g _S t _S T _O C _O A		ļ			
$\begin{array}{c c} \hline & 89C \\ 409 & T_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}T_{\mathbf{O}}C_{\mathbf{O}}A \end{array}$					$\left \mathbf{T_s C_s C_s A_s c_s c_s t_s g_s a_s a_s g_s t_s T_s C_s A_s c} \right $
400		<u> </u>			
$\frac{498}{0}$					$\left \mathbf{T_{O}^{C}_{O}^{C}_{O}^{A}_{O}^{c}_{s}^{c}_{s}^{t}_{s}^{g}_{s}^{a}_{s}^{a}_{s}^{g}_{s}^{t}_{s}^{T}_{O}^{C}_{O}^{A}} \right $
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 				498	$ _{\mathbf{O}^{\mathbf{C}}} $

			89D 499	$t_s c_s c_s a_s c_s c_s t_s g_s a_s a_s g_s t_s t_s c_s a_s c$
1185	90	CTATTCTGTCTCCTCA	90A	$C_sT_sA_sT_st_sc_st_sg_st_sc_st_sc_sC_sT_sC_sA$
L	L		<u>500</u>	
			90B	$C_sT_sA_sT_st_sc_st_sg_st_sc_st_sc_sC_sT_sC_sa$
			501	
			90C	$C_{\mathbf{O}}T_{\mathbf{O}}A_{\mathbf{O}}T_{\mathbf{O}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{O}}T_{\mathbf{O}}C$
			<u>502</u>	OA
			90D	$c_s t_s a_s t_s t_s c_s t_s g_s t_s c_s t_s c_s c_s t_s c_s a$
	<u> </u>		503	
1201	91	GACGCTTCCTATCACT	91A	$G_sA_sC_sG_sc_st_st_sc_sc_st_sa_st_sC_sA_sC_sT$
	<u> </u>		504	
	}		91B	$G_sA_sC_sG_sc_st_st_sc_sc_st_sa_st_sC_sA_sC_st$
	<u> </u>	<u> </u> .	505	
			91C	$G_{\mathbf{O}} \mathbf{A}_{\mathbf{O}} \mathbf{C}_{\mathbf{O}} \mathbf{G}_{\mathbf{O}} \mathbf{c}_{\mathbf{S}} \mathbf{t}_{\mathbf{S}} \mathbf{t}_{\mathbf{S}} \mathbf{c}_{\mathbf{S}} \mathbf{c}_{\mathbf{S}} \mathbf{t}_{\mathbf{S}} \mathbf{a}_{\mathbf{S}} \mathbf{t}_{\mathbf{S}} \mathbf{C}_{\mathbf{O}} \mathbf{A}_{\mathbf{O}} \mathbf{C}$
			<u>506</u>	o^{T}
			91D	$g_{s}a_{s}c_{s}g_{s}c_{s}t_{s}t_{s}c_{s}c_{s}t_{s}a_{s}t_{s}c_{s}a_{s}c_{s}t$
45:	<u> </u>	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	507	
1217	92	AAAGGAGTATCTGCCA	92A	$\mathbf{A_s}\mathbf{A_s}\mathbf{A_s}\mathbf{G_s}\mathbf{g_s}\mathbf{a_s}\mathbf{g_s}\mathbf{t_s}\mathbf{a_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{G_s}\mathbf{C_s}\mathbf{C_s}\mathbf{A}$
			508	
			92B	$A_{\mathbf{s}}A_{\mathbf{s}}A_{\mathbf{s}}G_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}a$
	<u> </u>		509	1
			92C	$A_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{O}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}G_{\mathbf{O}}C_{\mathbf{O}}C$
			<u>510</u>	$O^{\mathbf{A}}$
			92D	$a_s a_s a_s g_s g_s a_s g_s t_s a_s t_s c_s t_s g_s c_s c_s a$
			511	3 3 3 3 3 3 3 3 3 3 3 3 3
1233	93	TCACACAGCAGTGGCA	93A	$T_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}A$
	<u></u>		512	
			93B	$T_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}$
			513	
	ļ		93€	$ \mathbf{T_O} \mathbf{C_O} \mathbf{A_O} \mathbf{C_O} \mathbf{a_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{c_S} \mathbf{a_S} \mathbf{g_S} \mathbf{t_S} \mathbf{G_O} \mathbf{G_O} $
			514	COA
			93D	$t_s c_s a_s c_s a_s c_s a_s g_s c_s a_s g_s t_s g_s g_s c_s a$
	<u></u>		<u>515</u>	2 2 2 3 3 3 3 3 3 3
1249	94	CACTGGGCCTGTCTAA	94A	$C_{\mathbf{S}}A_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}A_{\mathbf{S}}A$
	<u> </u>		<u>516</u>	
			94B	$C_sA_sC_sT_sg_sg_sg_sc_sc_st_sg_st_sC_sT_sA_sa$
	<u> </u>	<u>L</u> .	517	

			94C 518	$\begin{bmatrix} \mathbf{C_O} \mathbf{A_O} \mathbf{C_O} \mathbf{T_O} \mathbf{g_S} \mathbf{g_S} \mathbf{g_S} \mathbf{c_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{t_S} \mathbf{C_O} \mathbf{T_O} \\ \mathbf{A_O} \mathbf{A} \end{bmatrix}$
			94D 519	$c_{\mathbf{S}}^{\mathbf{a}}{}_{\mathbf{S}}^{\mathbf{c}}{}_{\mathbf{S}}^{\mathbf{t}}{}_{\mathbf{S}}^{\mathbf{g}}{}_{\mathbf{S}}^{\mathbf{g}}{}_{\mathbf{S}}^{\mathbf{c}}{}_{\mathbf{S}}^{\mathbf{c}}{}_{\mathbf{S}}^{\mathbf{t}}{}_{\mathbf{S}}^{\mathbf{g}}{}_{\mathbf{S}}^{\mathbf{t}}{}_{\mathbf{S}}^{\mathbf{c}}{}_{\mathbf{S}}^{\mathbf{t}}{}_{\mathbf{S}}^{\mathbf{a}}{}_{\mathbf{S}}^{\mathbf{a}}$
1265	95	CATGTGCCCCGCGGCT	95A 520	$C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}T$
			95B 521	$C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}t$
			95C 522	$\begin{bmatrix} \mathbf{C_O} \mathbf{A_O} \mathbf{T_O} \mathbf{G_O} \mathbf{t_S} \mathbf{g_S} \mathbf{c_S} \mathbf{c_S} \mathbf{c_S} \mathbf{c_S} \mathbf{g_S} \mathbf{c_S} \mathbf{G_O} \mathbf{G_O} \\ \mathbf{C_O} \mathbf{T} \end{bmatrix}$
			95D 523	$c_{s}a_{s}t_{s}g_{s}t_{s}g_{s}c_{s}c_{s}c_{s}c_{s}g_{s}c_{s}g_{s}g_{s}c_{s}t$
1281	96	AGGGAGGAGCGCCAG	96A 524	$A_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}A_{\mathbf{S}}G$
			96B 525	$\mathbf{A_{S}G_{S}G_{S}G_{S}a_{S}g_{S}g_{S}a_{S}g_{S}c_{S}g_{S}g_{S}C_{S}C_{S}A_{S}g}$
:			96C 526	$\begin{vmatrix} \mathbf{A_O} \mathbf{G_O} \mathbf{G_O} \mathbf{a_S} \mathbf{g_S} \mathbf{g_S} \mathbf{a_S} \mathbf{g_S} \mathbf{c_S} \mathbf{g_S} \mathbf{g_S} \mathbf{C_O} \mathbf{C_O} \\ \mathbf{A_O} \mathbf{G} \end{vmatrix}$
			96D 527	$a_{S}g_{S}g_{S}g_{S}a_{S}g_{S}g_{S}a_{S}g_{S}c_{S}g_{S}g_{S}c_{S}c_{S}a_{S}g$
1297	97	CCACTGCCTTTTCTG	97A 528	$C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}G$
			97B 529	$C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}g$
			97C 530	$\begin{vmatrix} \mathbf{C_O}\mathbf{C_O}\mathbf{A_O}\mathbf{C_O}\mathbf{t_S}\mathbf{g_S}\mathbf{c_S}\mathbf{c_S}\mathbf{t_S}\mathbf{t_S}\mathbf{t_S}\mathbf{t_S}\mathbf{t_S}\mathbf{T_O}\mathbf{C_O}\mathbf{T} \\ \mathbf{O}\mathbf{G} \end{vmatrix}$
			97D 531	$c_s c_s a_s c_s t_s g_s c_s c_s t_s t_s t_s t_s t_s t_s c_s t_s g$
1313	98	TTAAAAAGGATTTAGG	98A 532	$\mathbf{T_{S}T_{S}A_{S}A_{S}a_{S}a_{S}a_{S}g_{S}g_{S}a_{S}t_{S}t_{S}T_{S}A_{S}G_{S}G}$
			98B 533	$\mathbf{T_{S}T_{S}A_{S}A_{S}}a_{S}a_{S}a_{S}g_{S}g_{S}a_{S}t_{S}t_{S}\mathbf{T_{S}A_{S}}G_{S}g$
			98C 534	$\begin{bmatrix} \mathbf{T_OT_OA_OA_O} \mathbf{a_S} \mathbf{a_S} \mathbf{a_S} \mathbf{g_S} \mathbf{g_S} \mathbf{a_S} \mathbf{t_S} \mathbf{t_S} \mathbf{T_OA_OG} \\ \mathbf{OG} \end{bmatrix}$
			98D 535	$t_{s}t_{s}a_{s}a_{s}a_{s}a_{s}a_{s}a_{s}g_{s}g_{s}a_{s}t_{s}t_{s}t_{s}t_{s}a_{s}g_{s}g$
1329	99	CATCGAGCCAAGTCAT	99A 536	$C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{C}_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{T}$

	.,	T		
			99B 537	$C_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}C_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{g}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{C}_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{t}$
			99C	C-A-T-C-G-G-G-G-G-G-T-C-
			538	$\begin{bmatrix} \mathbf{C_{O}A_{O}T_{O}C_{O}g_{S}a_{S}g_{S}c_{S}c_{S}a_{S}a_{S}g_{S}T_{O}C_{O}} \end{bmatrix}$
			330	A _O T
			99D	$c_s a_s t_s c_s g_s a_s g_s c_s c_s a_s a_s g_s t_s c_s a_s t$
			539	
1345	100	AGCCAGTCCCCCACAG	100	$A_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}G$
			A	
	<u> </u>		540	
			100B	$A_{\mathbf{s}}G_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}a_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}A_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}g$
			541	
			100C	$A_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}a_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}A_{\mathbf{O}}C_{\mathbf{O}}$
			<u>542</u>	$A_{\mathbf{O}}G$
			100	$a_sg_sc_sc_sa_sg_st_sc_sc_sc_sc_sc_sa_sc_sa_sg$
			Ð	
			<u>543</u>	
1361	101	CGGCCTGCAGCAGCCC	101	$C_sG_sG_sC_sc_st_sg_sc_sa_sg_sc_sa_sG_sC_sC_sC$
			A	
			544	
			101B	$C_sG_sG_sC_sc_st_sg_sc_sa_sg_sc_sa_sG_sC_sc_sc$
			545	
			101C	$\mid C_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{O}}C_{\mathbf{O}} \mid$
			<u>546</u>	c_0c
			101	$c_s g_s g_s c_s c_s t_s g_s c_s a_s g_s c_s a_s g_s c_s c_s c_s c_s$
			Ð	3-3-3 3 3-3 3 3-3 3 3-3 3
			<u>547</u>	·
1377	102	TGGGCTGACAGACACA	102	$T_sG_sG_sG_sc_st_sg_sa_sc_sa_sg_sa_sC_sA_sC_sA$
			A	
		·	548	
			102B	$T_sG_sG_sG_sc_st_sg_sa_sc_sa_sg_sa_sC_sA_sC_sa$
			549	
			102C	$T_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{O}}G_{\mathbf{O}}$
			<u>550</u>	C _O A
			102	$t_s g_s g_s g_s c_s t_s g_s a_s c_s a_s g_s a_s c_s a_s c_s a_s$
			Ð	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
			<u>551</u>	
1393	103	TGACAGATGTGAAGGT	103	
			A	
			<u>552</u>	

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			103B 553	$\mathbf{T_sG_sA_sC_s}\mathbf{a_sg_s}\mathbf{a_st_sg_st_sg_s}\mathbf{a_sA_sG_sG_s}\mathbf{t}$
			103C	$T_{\mathbf{O}}G_{\mathbf{O}}A_{\mathbf{O}}C_{\mathbf{O}}a_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{O}}G_{\mathbf{O}}$
			<u>554</u>	$G_{\mathbf{O}}T$
			103	$t_s g_s a_s c_s a_s g_s a_s t_s g_s t_s g_s a_s a_s g_s g_s t$
			Đ	
			<u>555</u>	
1409	104	CCCCGTGTGGAGAACG	104	$C_sC_sC_sC_sg_st_sg_st_sg_sg_sa_sg_sA_sA_sC_sG$
			A	
			<u>556</u>	
			104B	$C_sC_sC_sC_sg_st_sg_st_sg_sg_sa_sg_sA_sA_sC_sg$
			557	
			1004	$C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}A_{\mathbf{O}}A_{\mathbf{O}}$
			E	c_0 G
			<u>558</u>	
\			104	$c_s c_s c_s c_s g_s t_s g_s t_s g_s g_s a_s g_s a_s a_s c_s g$
			Ð	
			559	
1425	105	GCGGACTGCGTCTCTC	105	$G_sC_sG_sG_sa_sc_st_sg_sc_sg_st_sc_sT_sC_sT_sC$
			A	
			<u>560</u>	
			105B	$G_sC_sG_sG_sa_sc_st_sg_sc_sg_st_sc_sT_sC_sT_sc$
			<u>561</u>	
			105C	$G_{\mathbf{O}}C_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}$
			<u>562</u>	TOC
			105	$g_s c_s g_s g_s a_s c_s t_s g_s c_s g_s t_s c_s t_s c_s t_s c$
			Đ	-3 5-5-3 5 5 5-5 5-5 5 5 5 5
			<u>563</u>	
1441	106	GAAAGCGGGGACCTGG	106	$G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}G$
			A	0 0 0 0-0 0-0-0-0 0 0 0 0
	L		<u>564</u>	
			106B	$G_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}g$
			<u>565</u>	
			106C	$G_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}A_{\mathbf{O}}G_{\mathbf{S}}C_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{O}}G_{\mathbf{O}}$
			<u>566</u>	$\mathbf{G_{O}G}$
			106	$g_s a_s a_s a_s g_s c_s g_s g_s g_s g_s a_s c_s c_s t_s g_s g$
			Ð	2 2 3 3 3 3 3 3 3 3 3 3 3 3
			<u>567</u>	

1457	107	AGCTGCTGCCTCCAAA	107 A 568	$\begin{bmatrix} \mathbf{A_s} \mathbf{G_s} \mathbf{C_s} \mathbf{T_s} \mathbf{g_s} \mathbf{c_s} \mathbf{t_s} \mathbf{g_s} \mathbf{c_s} \mathbf{c_s} \mathbf{t_s} \mathbf{c_s} \mathbf{C_s} \mathbf{A_s} \mathbf{A_s} \mathbf{A} \end{bmatrix}$
			107B 569	$\mathbf{A_sG_sC_sT_sg_sc_st_sg_sc_st_sc_sC_sA_sA_s}$
			107C 570	$\begin{array}{c} \mathbf{A_O} \mathbf{G_O} \mathbf{C_O} \mathbf{T_O} \mathbf{g_S} \mathbf{c_S} \mathbf{t_S} \mathbf{g_S} \mathbf{c_S} \mathbf{c_S} \mathbf{t_S} \mathbf{c_S} \mathbf{C_O} \mathbf{A_O} \\ \mathbf{A_O} \mathbf{A} \end{array}$
			107 D 571	$a_{\mathbf{s}}\mathbf{g}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{t}_{\mathbf{s}}\mathbf{g}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{t}_{\mathbf{s}}\mathbf{g}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{c}_{\mathbf{s}}\mathbf{a}_{\mathbf{s}}\mathbf{a}_{\mathbf{s}}\mathbf{a}$
1473	108	ACTTCAGCCCTGCGGG	108 A 572	$\mathbf{A_sC_sT_sT_s}\mathbf{C_s}\mathbf{a_s}\mathbf{g_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{G_s}\mathbf{G_s}\mathbf{G}$
-			108B 573	$\mathbf{A_sC_sT_sT_s}\mathbf{C_s}\mathbf{a_s}\mathbf{g_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{c_s}\mathbf{t_s}\mathbf{g_s}\mathbf{C_s}\mathbf{G_s}\mathbf{G_s}\mathbf{g}$
			108C 574	$\begin{array}{c} \mathbf{A_O}\mathbf{C_O}\mathbf{T_O}\mathbf{T_O}\mathbf{c_S}\mathbf{a_S}\mathbf{g_S}\mathbf{c_S}\mathbf{c_S}\mathbf{c_S}\mathbf{c_S}\mathbf{t_S}\mathbf{g_S}\mathbf{C_O}\mathbf{G_O} \\ \mathbf{G_O}\mathbf{G} \end{array}$
			108 D 575	$a_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g$
1489	109	CATCATCTTACGCCAG	109 A 576	$\mathbf{C_s}\mathbf{A_s}\mathbf{T_s}\mathbf{C_s}\mathbf{a_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{a_s}\mathbf{c_s}\mathbf{g_s}\mathbf{C_s}\mathbf{C_s}\mathbf{A_s}\mathbf{G}$
			109B 577	$\mathbf{C_s}\mathbf{A_s}\mathbf{T_s}\mathbf{C_s}\mathbf{a_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{a_s}\mathbf{c_s}\mathbf{g_s}\mathbf{C_s}\mathbf{C_s}\mathbf{A_s}\mathbf{g}$
-			109C 578	$\mathbf{C_O}\mathbf{A_O}\mathbf{T_O}\mathbf{C_O}\mathbf{a_s}\mathbf{t_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{a_s}\mathbf{c_s}\mathbf{g_s}\mathbf{C_O}\mathbf{C_O}\mathbf{A}$ $\mathbf{O}\mathbf{G}$
			109 D 579	$c_s a_s t_s c_s a_s t_s c_s t_s t_s a_s c_s g_s c_s c_s a_s g$
1505	110	GAGGCGAATCAAATC	110 A 580	$G_{\mathbf{s}}A_{\mathbf{s}}G_{\mathbf{s}}G_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}A_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}C$
			110B 581	$G_{\mathbf{S}}A_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}A_{\mathbf{S}}A_{\mathbf{S}}T_{\mathbf{S}}c$
			110C 582	$\begin{array}{c} \mathbf{G_O}\mathbf{A_O}\mathbf{G_O}\mathbf{G_O}\mathbf{g_S}\mathbf{c_S}\mathbf{g_S}\mathbf{a_S}\mathbf{a_S}\mathbf{t_S}\mathbf{c_S}\mathbf{a_S}\mathbf{A_O}\mathbf{A_O} \\ \mathbf{T_O}\mathbf{C} \end{array}$
•			110 D 583	g _s a _s g _s g _s g _s c _s g _s a _s a _s t _s c _s a _s a _s a _s t _s c

1521	111	GCTCTATGACAGGGAG	111 A	$G_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}G$
			584	
			111B	$G_sC_sT_sC_st_sa_st_sg_sa_sc_sa_sg_sG_sG_sA_sg$
			<u>585</u>	
			111C	$\mid \mathbf{G_O}\mathbf{C_O}\mathbf{T_O}\mathbf{C_O}\mathbf{t_S}\mathbf{a_S}\mathbf{t_S}\mathbf{g_S}\mathbf{a_S}\mathbf{c_S}\mathbf{a_S}\mathbf{g_S}\mathbf{G_O}\mathbf{G_O}\mid$
			<u>586</u>	$A_{\mathbf{O}}G$
			111	$g_sc_st_sc_st_sa_st_sg_sa_sc_sa_sg_sg_sg_sa_sg$
			Ð	
			587	
1537	112	AACAATCCACCCTGCA	112	$A_sA_sC_sA_sa_st_sc_sc_sa_sc_sc_sc_sT_sG_sC_sA$
			A	
			588	
			112B	$A_sA_sC_sA_sa_st_sc_sc_sa_sc_sc_sc_sT_sG_sC_sa$
			589	
			112C	$A_OA_OC_OA_Oa_St_Sc_Sc_Sa_Sc_Sc_Sc_ST_OG_O$
			<u>590</u>	
	ļ			C _O A
			112	$a_s a_s c_s a_s a_s t_s c_s c_s a_s c_s c_s c_s t_s g_s c_s a$
			Đ	
			<u>591</u>	
1553	113	TTTCCAGCGAAGCTGT	113	$T_sT_sT_sC_sc_sa_sg_sc_sg_sa_sa_sg_sC_sT_sG_sT$
			A	
			<u>592</u>	
			113B	$T_sT_sT_sC_sc_sa_sg_sc_sg_sa_sa_sg_sC_sT_sG_st$
			593	
			113C	$\mid \mathbf{T_OT_OT_OC_Oc_sa_sg_sc_sg_sa_sa_sg_sC_OT_O} \mid$
			<u>594</u>	$G_{\mathbf{O}}$ T
			113	
			Đ	$t_s t_s t_s c_s c_s a_s g_s c_s g_s a_s a_s g_s c_s t_s g_s t$
			595	
1569	114	AGATGACCTCCAGAGG	114	A G A T g a c c t c c a G A G G
			A	$A_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}g_{\mathbf{s}}a_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}c_{\mathbf{s}}a_{\mathbf{s}}G_{\mathbf{s}}A_{\mathbf{s}}G_{\mathbf{s}}G$
			596	
			114B	A G A T g a c c t c c a G A G a
			597	$\begin{bmatrix} \mathbf{A_s} \mathbf{G_s} \mathbf{A_s} \mathbf{T_s} \mathbf{g_s} \mathbf{a_s} \mathbf{c_s} \mathbf{c_s} \mathbf{t_s} \mathbf{c_s} \mathbf{c_s} \mathbf{a_s} \mathbf{G_s} \mathbf{A_s} \mathbf{G_s} \mathbf{g} \end{bmatrix}$
 			114C	AcGoAcTogacotoca GoAc
			<u>598</u>	$\begin{bmatrix} \mathbf{A_O} \mathbf{G_O} \mathbf{A_O} \mathbf{T_O} \mathbf{g_S} \mathbf{a_S} \mathbf{c_S} \mathbf{c_S} \mathbf{t_S} \mathbf{c_S} \mathbf{c_S} \mathbf{a_S} \mathbf{G_O} \mathbf{A_O} \\ \mathbf{a_S} a$
			326	$G_{\mathbf{O}}$ G
			114	$a_s g_s a_s t_s g_s a_s c_s c_s t_s c_s c_s a_s g_s a_s g_s g$
			Đ	
			<u>599</u>	

1585	115	TTCTCAGGAACAGCCG	115	$T_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}G$
			A	
			<u>600</u>	
			115B	$T_sT_sC_sT_sc_sa_sg_sg_sa_sa_sc_sa_sG_sC_sC_sg$
			<u>601</u>	
			115C	$T_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}c_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}a_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}G_{\mathbf{O}}C_{\mathbf{O}}$
			602	$c_0 c$
			115	$t_{s}t_{s}c_{s}t_{s}c_{s}a_{s}g_{s}g_{s}a_{s}a_{s}c_{s}a_{s}g_{s}c_{s}c_{s}g$
			Đ	3 3 3 3 3 3 3 3 3 3 3 3 3 3
			603	
1601	116	ATGACAGGCTTTTTAT	116	$\mathbf{A_sT_sG_sA_s}\mathbf{c_s}\mathbf{a_s}\mathbf{g_s}\mathbf{g_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{t_s}\mathbf{T_s}\mathbf{T_s}\mathbf{A_s}\mathbf{T}$
		3	A	
			<u>604</u>	γ.
			116B	$\mathbf{A_sT_sG_sA_s}\mathbf{c_s}\mathbf{a_s}\mathbf{g_s}\mathbf{g_s}\mathbf{c_s}\mathbf{t_s}\mathbf{t_s}\mathbf{t_s}\mathbf{T_s}\mathbf{T_s}\mathbf{A_s}\mathbf{t_s}$
			<u>605</u>	
			116C	$\mathbf{A_O}\mathbf{T_O}\mathbf{G_O}\mathbf{A_O}\mathbf{c_S}\mathbf{a_S}\mathbf{g_S}\mathbf{g_S}\mathbf{c_S}\mathbf{t_S}\mathbf{t_S}\mathbf{t_S}\mathbf{T_O}\mathbf{T_O}\mathbf{A}$
			<u>606</u>	$\mathbf{o}^{\mathbf{T}}$
			116	$a_s t_s g_s a_s c_s a_s g_s g_s c_s t_s t_s t_s t_s t_s a_s t$
			Ð	0 0-0 0 0 0-0-0 0 0 0 0 0 0
			<u>607</u>	

Please amend Table 2 starting on page 84 as follows:

Table 2 Oligomeric compounds of the invention

Oligomeric compounds were evaluated for their potential to knockdown Survivin mRNA in 15PC3 cells. The data are presented as percentage downregulation relative to mock transfected cells. Transcript steady state was monitored by Real-time PCR and normalised to the GAPDH transcript steady state. Note that all LNA C are 5'-Methyl-Cytosine.

Target site	SeqID NO:	Oligomeric compound Sequence 5'-3'	SeqID+ Design NO:		% Inhibi-tion at 25 nM	% Inhibi-tion at 5 nM oligo.
62(c)	117	AGGCAGGGGGCAACGT	117 A 608	$A_sG_sG_sC_sa_sg_sg_sg_sg_sg_sc_sa_sA_sC_sG_sT$	<20	<20
			117 B	$A_sG_sG_sC_sa_sg_sg_sg_sg_sg_sc_sa_sA_sC_sG_st$		

609	
$\begin{vmatrix} 117 & A_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{S}}g_{s}g_{s}g_{s}g_{s}g_{s}g_{s}g_{s}g_{$	a _s A _O C
610	
$\begin{array}{ c c c c c }\hline & 117 & a_sg_sg_sg_sg_sg_sg_sg_sg_sc_sa_sa_sc_sg_s\\\hline & & & & & & & & & & & & & & & & & & &$	
611	1 m m 107 122
119(c) 118 CCAAGAAGGGCCAGTT $\frac{118}{c_sC_sA_sA_sg_sa_sa_sg_sg_sg_sc_sc_sA_s}$	G_sT_sT 87 33
A	
612	
$\begin{array}{ c c c c c }\hline & 118 & C_sC_sA_sA_sg_sa_sg_sg_sg_sc_sc_sA_s \\ \hline \end{array}$	r _s T _s t
B	
613	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$C_sA_OG_O$
$\left \begin{array}{c c} & \mathbf{T_{O}T} \end{array} \right $	
614	
$\begin{array}{ c c c c c }\hline & 118 & c_sc_sa_sa_sg_sa_sa_sg_sg_sc_sc_sa_sg_st_st \\\hline \end{array}$	
615	
190(c) 119 TGGCTCGTTCTCAGTG 119 $T_sG_sG_sC_st_sc_sg_st_st_sc_st_sc_sA_sG_s$	$\Gamma_{\rm s}G$ 79 27
A	
<u>616</u>	
	$\Gamma_{\rm s}$ g
₽	
<u>617</u>	
	$A_{O}G_{O}T$
$\left \begin{array}{c c} \mathbf{c} & \mathbf{o} \mathbf{c} \end{array}\right $	
618	
$\frac{119}{t_s g_s g_s c_s t_s c_s g_s t_s t_s c_s t_s c_s a_s g_s t_s g}$	
Ð	
<u>619</u>	
193(c) 120 GTCTGGCTCGTTCTCA $\frac{120}{G_sT_sC_sT_sg_sg_sc_st_sc_sg_st_st_s}$ $\frac{1}{G_sT_sC_sT_sg_sg_sc_st_sc_sg_st_st_s}$	$C_s \mathbf{A}$ 84 47
A	
<u>620</u>	
$\frac{120}{G_sT_sC_sT_sg_sg_sc_st_sc_sg_st_st_sC_sT_s}$	C _s a
В	
621	
$\frac{120}{G_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}g_{s}g_{s}c_{s}t_{s}c_{s}g_{s}t_{s}t}$	O_{1}
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
$ \underline{622} ^{COA}$	
$\frac{112}{112} g_s t_s c_s t_g g_s g_s c_s t_s c_s g_s t_s t_s c_s t_s c_s a$	
Ð	

			623			
194(c)	121	AGTCTGGCTCGTTCTC	121	$A_sG_sT_sC_st_sg_sg_sc_st_sc_sg_st_sT_sC_sT_sC$	75	49
			A		İ	
			<u>624</u>			
			121	$A_sG_sT_sC_st_sg_sg_sc_st_sc_sg_st_sT_sC_sT_sc$		
			₽			
			<u>625</u>		<u> </u>	
			121	$A_{O}G_{O}T_{O}C_{O}t_{s}g_{s}g_{s}c_{s}t_{s}c_{s}g_{s}t_{s}T_{O}C_{O}$		ĺ
			E	TOC		
	ļ		<u>626</u>		ļ	
			121	$a_sg_st_sc_st_sg_sg_sc_st_sc_sg_st_st_sc_st_sc$		
			Đ			
160()	100	TOCATOLAGOGAGGG	627			
168(c)	122	TGGATGAAGCCAGCCT	122	$T_sG_sG_sA_st_sg_sa_sa_sg_sc_sc_sa_sG_sC_sC_sT$	67	41
			A			
	-		628	TO CALL COCK		
			122 D	$T_sG_sG_sA_st_sg_sa_sa_sg_sc_sc_sa_sG_sC_sC_st$		
			B			
			629 122	T. C. C. A. tanaaaaa C. C.	-	-
			C	$T_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}A_{\mathbf{O}}t_{s}g_{s}a_{s}a_{s}g_{s}c_{s}c_{s}a_{s}G_{\mathbf{O}}C_{\mathbf{O}}$		
			630	$C_{\mathbf{O}}$ T		
			122	$t_sg_sg_sa_st_sg_sa_sa_sg_sc_sc_sa_sg_sc_sc_st$		
			Đ	1585854515854545850505458505051		
			631			
215(c)	123	AGCAGAAGAAACACTG	123	$A_sG_sC_sA_sg_sa_sa_sg_sa_sa_sa_sc_sA_sC_sT_sG$	85	26
` ,			A	1130303113834488344403113031130	"	- "
			632			
			123	$A_sG_sC_sA_sg_sa_sa_sg_sa_sa_sc_sA_sC_sT_sg$		†
			₽			
			633			
			123	AOGOCOAOgsasasgsasasascsAOCO		
			E	T _O G		
			<u>634</u>	100		
			123	$a_sg_sc_sa_sg_sa_sa_sg_sa_sa_sc_sa_sc_st_sg$		
			Ð			
			<u>635</u>			
261(c)	124	TCCTCTATGGGGTCGT	124	$T_sC_sC_sT_sc_st_sa_st_sg_sg_sg_sT_sC_sG_sT$	23	<20
			A			
			<u>636</u>			
			12 4	$T_sC_sC_sT_sc_st_sa_st_sg_sg_sg_sT_sC_sG_st$		
	ŀ		₿			

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<u> </u>	1		637			
	 		124	$T_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}c_{s}t_{s}a_{s}t_{s}g_{s}g_{s}g_{s}T_{\mathbf{O}}C_{\mathbf{O}}$		
			E			9
			638	G_{O} T		
			124	t _s c _s c _s t _s c _s t _s a _s t _s g _s g _s g _s g _s t _s c _s g _s t		
			Đ	13-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-		
			639			
286(c)	125	GCAACCGGACGAATGC	125	$G_sC_sA_sA_sc_sc_sg_sg_sa_sc_sg_sa_sA_sT_sG_sC$	64	<20
			A	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		
			640			
			125	$G_sC_sA_sA_sc_sc_sg_sg_sa_sc_sg_sa_sA_sT_sG_sc$		
			₽			
			641			
			125	$G_{O}C_{O}A_{O}A_{O}c_{s}c_{s}g_{s}g_{s}a_{s}c_{s}g_{s}a_{s}A_{O}T_{O}$		
			E	$G_{\mathbf{O}}^{\mathbf{C}}$		
			642	300		
			125	$g_sc_sa_sa_sc_sc_sg_sg_sa_sc_sg_sa_sa_st_sg_sc$		
			Đ	•		
			643			
267(c)	126	TTATGTTCCTCTATGG	126	$T_sT_sA_sT_sg_st_st_sc_sc_st_sc_st_sA_sT_sG_sG$	53	<20
			A			
			644		ļ.	
			126	$T_sT_sA_sT_sg_st_st_sc_sc_st_sc_st_sA_sT_sG_sg$		
			₽	·		
			645		.	
			126	$T_{\mathbf{O}}T_{\mathbf{O}}A_{\mathbf{O}}T_{\mathbf{O}}g_{s}t_{s}t_{s}c_{s}c_{s}t_{s}c_{s}t_{s}A_{\mathbf{O}}T_{\mathbf{O}}G$		
			C	OG		
			<u>646</u>		<u> </u>	
			126	$t_st_sa_st_sg_st_st_sc_sc_st_sc_st_sa_st_sg_sg$		
		·	Đ			
2223	1.5-	C.C. C. C. C. C. C. C. C. C. C. C. C. C.	647		1	120
325(c)	127	GGTTAATTCTTCAAAC	127	$G_sG_sT_sT_sa_sa_st_st_sc_st_st_sc_sA_sA_sC$	17	<20
			A			
			648	G G M M	ļ	
			127	$G_sG_sT_sT_sa_sa_st_st_sc_st_st_sc_sA_sA_sA_sc$		
			B			
	<u> </u>		649			
			127	$G_{\mathbf{O}}G_{\mathbf$		
			C	OC		
 	 		650			
			127	$g_sg_st_st_sa_sa_st_st_sc_st_st_sc_sa_sa_sa_sc$		
			Ð		<u> </u>	

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			651			
353(c)	128	CTCTGTCCAGTTTCAA	128	$C_sT_sC_sT_sg_st_sc_sc_sa_sg_st_st_sT_sC_sA_sA$	76	60
			A			
			652			
			128	$C_sT_sC_sT_sg_st_sc_sc_sa_sg_st_st_sT_sC_sA_sa$	77	
			₽			
			653			
			128	$C_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}T_{\mathbf{O}}g_{s}t_{s}c_{s}c_{s}a_{s}g_{s}t_{s}t_{s}T_{\mathbf{O}}C_{\mathbf{O}}A$		
			E			
			654	$O^{\mathbf{A}}$		
			128	$c_s t_s c_s t_s g_s t_s c_s c_s a_s g_s t_s t_s t_s c_s a_s a$		
			Ð			
			655			
375(c)	129	GCAATTTTGTTCTTGG	129	$G_sC_sA_sA_st_st_st_sg_st_st_sc_sT_sT_sG_sG$	73	49
			A			
			656			
			129	$G_sC_sA_sA_st_st_st_sg_st_st_sc_sT_sT_sG_sg$		
			₽			
			657			
	ļ	-	129	$G_{O}C_{O}A_{O}A_{O}t_{s}t_{s}t_{s}t_{s}g_{s}t_{s}t_{s}c_{s}T_{O}T_{O}G$	i	
			E		}	
			658	$\mathbf{o}_{\mathbf{G}}$		
			129	$g_s c_s a_s a_s t_s t_s t_s t_s g_s t_s t_s c_s t_s t_s g_s g$		
			Đ			
			659			
464(c)	130	CTCAATCCATGGCAGC	130	$C_sT_sC_sA_sa_st_sc_sc_sa_st_sg_sg_sC_sA_sG_sC$	77	40
			A	- 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3		
			660			
	<u> </u>		130	$C_sT_sC_sA_sa_st_sc_sc_sa_st_sg_sg_sC_sA_sG_sc$		
			₽			
			661			
	<u> </u>		130	$C_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}A_{\mathbf{O}}a_{s}t_{s}c_{s}c_{s}a_{s}t_{s}g_{s}g_{s}C_{\mathbf{O}}A_{\mathbf{O}}$		
			C			
			662	G_{OC}		
	 		130	$c_s t_s c_s a_s a_s t_s c_s c_s a_s t_s g_s g_s c_s a_s g_s c$		1
			Đ			
			663			
159(c)	131	CCAGCCTCGGCCATCC	131	$C_sC_sA_sG_sc_st_sc_sg_sg_sc_sc_sA_sT_sC_sC$	80	29
` '			A	-0-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-		
			664			
	<u> </u>		131	$C_sC_sA_sG_sc_st_sc_sg_sg_sc_sc_sA_sT_sC_sc$	94	
		1	,		/	

	1		665			1
			131	CaCaAaCaactaggaaAaTa		
			C	$\begin{bmatrix} \mathbf{C_{O}C_{O}A_{O}G_{O}c_{s}c_{s}t_{s}c_{s}g_{s}g_{s}c_{s}c_{s}A_{O}T_{O}} \end{bmatrix}$		
			666	C^{O}		
	 -		131			+
			Đ	$\left \begin{array}{c} c_sc_sa_sg_sc_sc_st_sc_sg_sg_sc_sc_sa_st_sc_sc \\ \end{array}\right $		1
	:		667			
350(c)	132	TGTCCAGTTTCAAAAA	132	TCTCaaatttaaAAAA	<20	<20
330(0)	132	IGICCAGITICAAAAA	A	$T_sG_sT_sC_sc_sa_sg_st_st_sc_sa_sA_sA_sA_sA_s$	_20	\20
			668			
			132	TCTCacatttacAAAa		
			B	$T_sG_sT_sC_sc_sa_sg_st_st_sc_sa_sA_sA_sA_s$		
	İ		669			
 	 		132	T-C-T-C-anatttanA-A-A		-
			C	$T_{\mathbf{O}}G_{\mathbf{O}}T_{\mathbf{O}}C_{\mathbf{O}}c_{s}a_{s}g_{s}t_{s}t_{s}c_{s}a_{s}A_{\mathbf{O}}A_{\mathbf{O}}A$,	
]			670	$O^{\mathbf{A}}$		
			132	$t_sg_st_sc_sc_sa_sg_st_st_st_sc_sa_sa_sa_sa_sa$		1
			Đ	Isgs Isososasgs Is Is Isosasasasas		
			671			
351(c)	133	CTGTCCAGTTTCAAAA	133	$C_sT_sG_sT_sc_sc_sa_sg_st_st_st_sc_sA_sA_sA_sA$	<20	<20
331(0)	155	CIGICCAGIIICALLI	A	Cs1sUs1sususasgskikkusAsAsAsA	120	20
			672			
			133	$C_sT_sG_sT_sc_sc_sa_sg_st_st_st_sc_sA_sA_sA_sa$		
			B	C _S 1 _S C _S 1 _S C _S C _S a _S g _S G _S G _S G _S A _S A _S A _S a		
			673			
	-		133	$C_{O}T_{O}G_{O}T_{O}c_{s}c_{s}a_{s}g_{s}t_{s}t_{s}t_{s}c_{s}A_{O}A_{O}A$		+
			E			
			674	$O^{\mathbf{A}}$		
	 		133	$c_s t_s g_s t_s c_s c_s a_s g_s t_s t_s t_s c_s a_s a_s a_s a_s$		
			Đ	Cs158515C5C54585151515C54545454		
			675			
47(c)	134	TCGGGGCACCCATGCC	134	$T_sC_sG_sG_sg_sg_sc_sa_sc_sc_sc_sa_sT_sG_sC_s$	-	
17(0)	'''		Δ.			
			676	C		
	1		134	TCGGggcacccaTGC	1	
			B	$T_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf$		
			677	С		
	+		134	ToCoGoGogggggggggg		
			C	$T_{\mathbf{O}}C_{\mathbf{O}}G_{\mathbf{O}}G_{\mathbf{O}}g_{\mathbf{S}}g_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}c_{\mathbf{S}}a_{\mathbf{S}}T_{\mathbf{O}}$		
			678	$\mathbf{G^{O}C^{O}C}$		
-	 		134	teggggeetgee	1	
			134 Đ	$t_{S}c_{S}g_{S}g_{S}g_{S}g_{S}g_{S}c_{S}a_{S}c_{S}c_{S}c_{S}c_{S}c_{S}c_{S}c_{S}c_{S}$		
			14	<u> </u>]	

			679	
456(c)	135	ATGGCAGCCAGCTGCT	135	$A_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}$
			A	T
			680	1
			135	$A_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}C_{\mathbf{S}}a_{\mathbf{S}}g_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{S}}t$
			B	
			681	
			135	$\mathbf{A_OT_OG_OG_Oc_Sa_Sg_Sc_Sc_Sa_Sg_Sc_ST_O}$
			E	$G_{O}C_{O}T$
		_	<u>682</u>	30301
			135	$a_s t_s g_s g_s c_s a_s g_s c_s c_s a_s g_s c_s t_s g_s c_s t$
			Ð	3 5-5-5 5 5-5 5 5 5 5 5 5 5 5
	İ		683	
470(c)	136	AGAGGCCTCAATCCAT	136	$A_sG_sA_sG_sg_sc_sc_st_sc_sa_sa_st_sC_sC_sA_s$
			A	T
			684	1
			136	$A_sG_sA_sG_sg_sc_sc_st_sc_sa_sa_st_sC_sC_sA_st$
			₽	3 3 3 5 5 5 5 5 5 5 5 5 5
			685	
			136	$A_OG_OA_OG_Og_sc_sc_st_sc_sa_sa_st_sC_OC$
	İ		E	$\mathbf{O}^{\mathbf{A}_{\mathbf{O}}\mathbf{T}}$
			686	0401
			136	$a_S g_S a_S g_S g_S c_S c_S t_S c_S a_S a_S t_S c_S c_S a_S t$
			Ð	303 30303 3 3 3 3 3 3 3 3
	İ		687	
55(c)	137	GGGCAACGTCGGGGCA	137	$G_sG_sG_sC_sa_sa_sc_sg_st_sc_sg_sg_sG_sG_sC_s$
			A	A
			<u>688</u>	
		_	137	$G_sG_sG_sC_sa_sa_sc_sg_st_sc_sg_sg_sG_sG_sC_s$
			₽	a
			<u>689</u>	
			137	$G_OG_OG_OC_Oa_Sa_Sc_Sg_St_Sc_Sg_Sg_SG_O$
			E	$G_{O}C_{O}A$
			<u>690</u>	0.0
			137	$g_Sg_Sg_Sc_Sa_Sa_Sc_Sg_St_Sc_Sg_Sg_Sg_Sg_Sc_Sa$
			Đ	
			<u>691</u>	
66(c)	138	TGCCAGGCAGGGGCA	138	$\mathbf{T_{S}G_{S}C_{S}C_{S}a_{S}g_{S}g_{S}c_{S}a_{S}g_{S}g_{S}g_{S}G_{S}G_{S}C_{S}}$
			A	A
			692	
			138	
			₿	

693 138 T _e G _e C _e C _e a _e g _e g _e	2 2 2 2 C C C
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694	
$\frac{138}{138}$ $t_s g_s c_s c_s a_s g_s g_s c_s a_s$	$_{s}g_{s}g_{s}g_{s}g_{s}g_{s}c_{s}a$
D	
695	~ ~ ~ ~
	$\mathbf{g_sc_sa_sg_sg_sC_sG_sC_s}$
A A	
696	
$\left \begin{array}{c c} & 139 \end{array} \right C_{\mathbf{s}} C_{\mathbf{s}} G_{\mathbf{s}}	$g_s^{} c_s^{} a_s^{} g_s^{} g_s^{} C_s^{} G_s^{} C_s^{}$
697	
$\frac{139}{\text{CoCoGoGogs}}$	$\mathbf{g_s}\mathbf{t_s}\mathbf{g_s}\mathbf{c_s}\mathbf{a_s}\mathbf{g_s}\mathbf{g_s}\mathbf{C_O}$
$\left \begin{array}{c c} \mathbf{c} & \mathbf{G_{O}C_{O}A} \end{array}\right $	
698	
$\frac{139}{c_s c_s g_s g_s g_s g_s t_s g_s c_s}$	cacgegecegecea
	3 30303 303 3
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	$t_s c_s c_s g_s g_s G_s G_s T_s$
	5-2-25-25-25-2
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	$g_s c_s t_s c_s c_s g_s g_s G_O$
	55°5°5°5°5°5°5°5°5°5°5°5°5°5°5°5°5°5°5
$\left \begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	
	TCCGGGG
	$_{s}T_{s}C_{s}C_{s}G_{s}G_{s}G_{s}G$
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
	A T C
3-3-3-3-3-3-3	$a_s g_s t_s g_s g_s A_s T_s G_s$
A A	
704	. A TE C
	$a_S g_S t_S g_S g_S A_S T_S G_S$
B a	
705	
$\left \begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	$g_s c_s a_s g_s t_s g_s g_s A_O$
706	
$\frac{141}{141} g_S t_S g_S g_S g_S g_S g_S g_S g_S g_S g_S g$	$g_S t_S g_S g_S a_S t_S g_S a$

	Τ	T	707	T
260(c)	142	CCTCTATGGGGTCGTC	142	CCTC+o+aaaa+CCTC
200(0)	142	CCICIAIGGGGICGIC		$C_{\mathbf{S}}C_{\mathbf{S}}T_{\mathbf{S}}C_{\mathbf{S}}t_{\mathbf{S}}a_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}t_{\mathbf{S}}C_{\mathbf{S}}G_{\mathbf{S}}T_{\mathbf{S}}C$
			A 700	
	ļ		708	G G T G t t t G G T t
			142	$C_{\mathbf{s}}C_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}C_{\mathbf{s}}G_{\mathbf{s}}T_{\mathbf{s}}t$
			B	
			709	
			142	$C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{O}}C_{\mathbf{S}}a_{\mathbf{S}}C_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}g_{\mathbf{S}}G_{\mathbf{S}}C_{\mathbf{O}}G$
			E	$O^{T}O^{C}$
			<u>710</u>	
			142	$c_s c_s t_s c_s t_s a_s t_s g_s g_s g_s g_s t_s c_s g_s t_s c$
			Ð	
			711	
274(c)	143	ATGCTTTTTATGTTCC	143	$A_sT_sG_sC_st_st_st_st_st_sa_st_sg_sT_sT_sC_sC$
			A	
			712	
			143	$A_sT_sG_sC_st_st_st_st_st_sa_st_sg_sT_sT_sC_st$
			₿	3 3 3 3 3 3 3 3 3 3
			713	
			143	$A_{\mathbf{O}}T_{\mathbf{O}}G_{\mathbf{O}}C_{\mathbf{O}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}t_{\mathbf{S}}g_{\mathbf{S}}T_{\mathbf{O}}T_{\mathbf{O}}$
			E	
			714	C^{O} C
			143	atacttttatattcc
			Đ	$a_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}c$
			715	:
384(c)	144	GTTTCCTTTGCAATTT	144	CTTTCatttcaATTT
304(0)	144	GITTEETTTGEARTTT		$G_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}\mathbf{t}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{c}_{\mathbf{S}}\mathbf{a}_{\mathbf{S}}\mathbf{A}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{T}_{\mathbf{S}}\mathbf{T}$
			A	
	<u> </u>		716	C T T T
			144	$G_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}C_{\mathbf{s}}A_{\mathbf{s}}T_{\mathbf{s}}T_{\mathbf{s}}t$
			₽	
	<u> </u>		717	
			144	$G_{\mathbf{O}}^{\mathbf{T}} \mathbf{O}^{\mathbf{T}} \mathbf{O}^{\mathbf{T}} \mathbf{O}^{\mathbf{C}} \mathbf{S}^{\mathbf{C}} \mathbf{S}^{\mathbf{t}} \mathbf{S}^{\mathbf{t}} \mathbf{S}^{\mathbf{t}} \mathbf{S}^{\mathbf{g}} \mathbf{S}^{\mathbf{c}} \mathbf{S}^{\mathbf{a}} \mathbf{S}^{\mathbf{A}} \mathbf{O}^{\mathbf{T}}$
			E	$O^{T}O^{T}$
	ļ		718	
			144	$g_s t_s t_s t_s c_s c_s t_s t_s t_s g_s c_s a_s a_s t_s t_s t$
			Ð	
			719	
ISIS	145	TGTGCTATTCTGTGAA	145	$T_sG_sT_sG_sc_st_sa_st_st_sc_st_sg_st_sg_sA_sA_sT_sT$
23722		TT (18-mer)	A	
			720	
	1	** ''	145	$T_{\mathbf{O}}G_{\mathbf{O}}T_{\mathbf{O}}G_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}a_{\mathbf{s}}t_{\mathbf{s}}t_{\mathbf{s}}c_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}t_{\mathbf{s}}g_{\mathbf{s}}A_{\mathbf{O}}A_{\mathbf{O}}$
			E	ToT
		1		

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		<u>721</u>	T _O T
		145	t _s g _s t _s g _s c _s t _s a _s t _s t _s c _s t _s g _s t _s g _s a _s a _s t _s t
		- G	
		<u>722</u>	
		145F	$T_sG_sT_sG_sc_st_sa_st_st_sc_st_sg_st_sg_sA_sA_sT_sT$
		<u>723 </u>	
146		146	$T_s\underline{A}_s\underline{A}_sG_sc_st_sg_st_st_sc_st_s\underline{a}_st_sg_s\underline{T}_s\underline{G}_sT_sT^*$
		A	
	1	<u>724</u>	
	-	146	$T_{O}\underline{A}_{O}\underline{A}_{O}G_{s}c_{s}t_{s}g_{s}t_{s}t_{s}c_{s}t_{s}\underline{a}_{s}t_{s}g_{s}\underline{T}_{O}\underline{G}_{O}$
	1	e	TOT*
	1	<u>725</u>	-0-
		146F	$T_s\underline{A}_s\underline{A}_sG_sc_st_sg_st_st_sc_st_s\underline{a}_st_sg_s\underline{T}_s\underline{G}_sT_sT^*$
	1	<u>726</u>	

^{*} relates to compound Underlined indicates mismatch compared to above compound. Compound 145F and 146F contains the MOE chemistry in capital letters italic which is the compound ISIS23722.

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Please amend Table 3 starting on page 88 as follows:

Table 3 IC₅₀ (nM) of LNA (β -D-oxy-LNA) containing oligomeric in two cell lines of different origin

Oligomeric compounds were evaluated for their potential to knockdown Survivin mRNA in 15PC3 and MCF7 cells. Transcript steady state was monitored by Real-time PCR and normalised to the GAPDH transcript steady state.

Seq ID/design	MCF7	15PC3
NO S	11.0	<i>E</i>
2A-147	28	5
2B -148		<5
4 A - <u>155</u>		<5
4 B -156		5
6A- 163	8	3
6B - <u>164</u>		<5
9A- 175	11	3
15A-199	1	<1
15B-200		<1
15E-203		1
118A-612		<5
120A-620		<25
123A-623		<5
128A-652		<5
128B-653		<25
129A 656		<25
131A-664		<25
131B-665		<5

Please amend the paragraph on page 88, lines 14-15, as follows:

Compounds of particular interest are 2A, 2B, 4A, 4B, 6A, 6B, 15A, 15B, 15E, 119A, 119B, 121A, 121B, 128A, 128B, 130A, 130B, 131A and 131B. 147, 148, 155, 156, 163, 164, 199, 200, 203, 616, 617, 624, 625, 652, 653, 660, 661, 664, and 665.

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Please amend the paragraph on page 95, lines 5-21, as follows:

Human 15PC3 xenografted tumors according to Example 13 were homogenized in 10 volumes of 0,5% Igepal CA-630, 25 mM Tris pH 8.0, 25 mM EDTA, 100 mM NaCl, 1mg/ml Proteinase K1 and incubated overnight at 37 degrees celsius followed by phenolchloroform extraction. The concentration of antisense oligonucleotide 2650 in the combined aqueous phase was determined using a sequence specific ELISA assay. Two probes, one labelled with biotin and one labelled with digoxigenin (DIG) with complementary sequences to the antisense oligonucleotide are hybridised to the antisense oligo. The complex is captured by immobilized streptavidin and quantified using a horse raddish peroxidase-conjugated antidigoxigenin antibody and standard ELISA procedures. Briefly, 10 nM DNA capture probe (5'-aactgtgc-Biotin-3') and 10 nM LNA detection probe (5'-DIG-GATGTTTCgatgtttc-3')(SEQ ID NO: 738) were mixed with sample or standards in 1 % blocking reagent (Roche cat. 1 096 176) in PBS. The probes were annealed to the oligo by heating the mixture to 70 degrees celsius and gradual cooling to 20 degrees Celsius. The mixture was transferred to streptavidin-coated wells. The amount of captured DIG-probe is quantified using an HRPconjugated Anti-DIG antibody fragment (Roche) and standard ELISA procedures. At least 1,3μg/g tumours tissue of the oligomeric compound 15A was detected (data not adjusted for recovery).